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CITY AND COUNTY OF SAN FRANCISCO

UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF CALIFORNIA

CALIFORNIA RESTAURANT
ASSOCIATION,

Plaintiff,

vs.

THE CITY AND COUNTY OF SAN
FRANCISCO AND THE SAN
FRANCISCO DEPARTMENT OF
PUBLIC HEALTH,

Defendants.

Case No. C08-3247 CW

**DECLARATION OF DR. MITCHELL
H. KATZ IN OPPOSITION TO
PLAINTIFF'S MOTION FOR
DECLARATORY RELIEF AND A
PRELIMINARY INJUNCTION**

Hearing Date: September 4, 2008
Time: 2 p.m.
Place: Ctrm 2, 4th Floor

I, Dr. Mitchell H. Katz, declare as follows:

1. I have personal knowledge of the matters stated herein, except for those matters set forth on information and belief, which I believe to be true, and if called to testify, I can and will testify competently as to all matters set forth herein.
2. I am the Director of Health for the Department of Public Health (the "Department") of the City and County of San Francisco ("the City" or "San Francisco"). I have held this position since 1997. A copy of my *curriculum vitae* is attached hereto as Exhibit A.
3. Pursuant to § 4.110 of the San Francisco City Charter ("Charter"), the Health Commission and the Department are charged with "provid[ing] for the preservation, promotion and protection of the physical and mental health of the inhabitants of the City and County" of San Francisco. A core function of the Department is to conduct health assessments and determine factors that negatively affect the health of San Francisco residents. The Department also enforces provisions of the San Francisco Health Code (the "Health Code") and other applicable laws regulating service of food directly to consumers in the City.
4. Because of the importance of the public health risk caused by obesity, I participated in all aspects of determining the need for Ordinance 40-08 ("Ordinance 40-08" or "Menu Labeling Ordinance"), and I am submitting this declaration in opposition to the California Restaurant Association's ("CRA") motion for declaratory relief and a preliminary injunction.

OBESITY IS EPIDEMIC IN THE U.S., CALIFORNIA, AND SAN FRANCISCO

5. An obesity epidemic currently damages the health of many Americans, including residents of San Francisco.¹ Over the last 25 years, obesity rates have doubled among U.S. adults and tripled among children and teens.² In the last decade alone, obesity rates have increased in *every* state

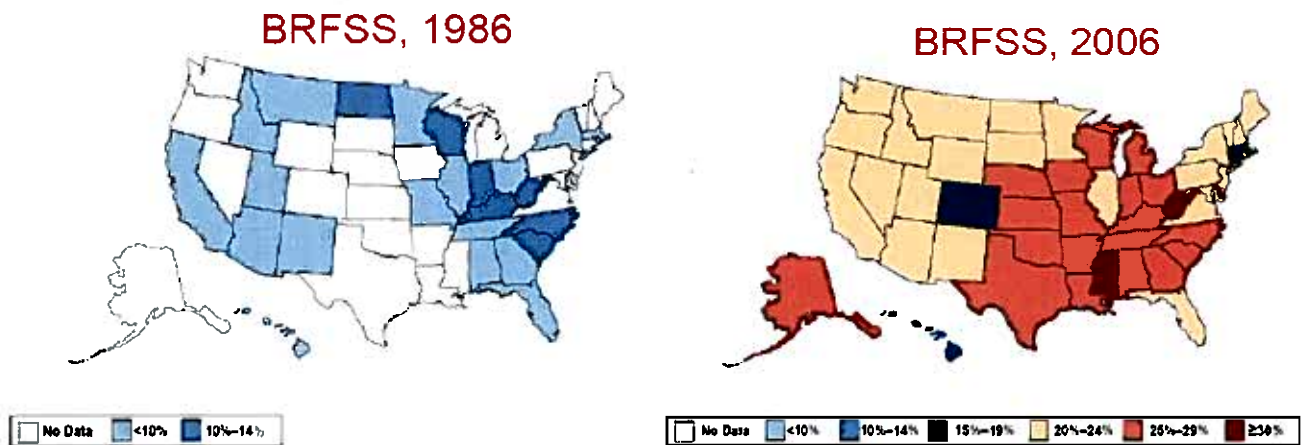
¹ The Centers for Disease Control and Prevention (CDC) uses the terms "overweight" and "obesity" as "labels for ranges of weight that are greater than what is generally considered healthy for a given height." CENTERS FOR DISEASE CONTROL AND PREVENTION (CDC), U.S. DEP'T OF HEALTH AND HUMAN SERVS., DEFINING OVERWEIGHT AND OBESITY, <http://www.cdc.gov/nccdphp/dnpa/obesity/defining.htm>. An adult who has a Body Mass Index (BMI) between 25 and 29.9 is considered overweight. An adult who has a BMI of 30 or higher is considered obese. *Id.*

² Ogden CL, Carroll MD, Curtin LR, McDowell MA, Tabak CJ, Flegal KM. Prevalence of overweight and obesity in the United States, 1999-2004. *Journal of the American Medical Association* (continued on next page)

in the nation.³ In 1995, less than 20% of adults were obese in each of the fifty states. Just ten years later in 2005, less than 20% of adults were obese in only *four* states, while in seventeen states, 25% or more of adults were obese.⁴ In California, the percentage of obese adults has doubled to 23%, and more than one third of children are overweight or at risk of being overweight.⁵

Obesity Trends* Among U.S. Adults

(*BMI ≥ 30 , or ~ 30 lbs. overweight for 5' 4" person)



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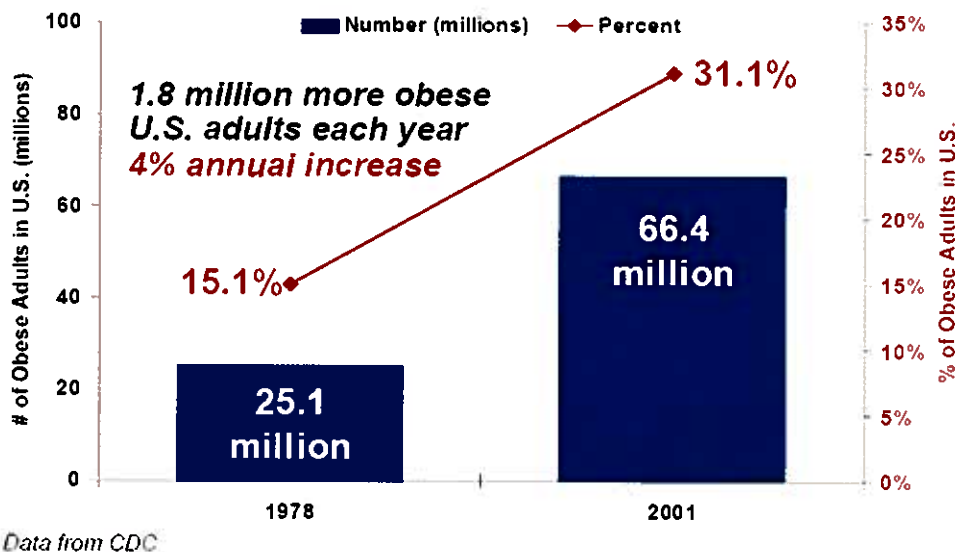
Association, 295:1549-1555, 2006; see also *Pelman v. McDonald's Corp.*, 237 F. Supp. 2d 512, 519-20 (S.D.N.Y. 2003) (summarizing rising obesity rates among adults and children).

³ U.S. DEP'T OF HEALTH & HUMAN SERVS., THE SURGEON GENERAL'S CALL TO ACTION TO PREVENT AND DECREASE OVERWEIGHT AND OBESITY (2001), <http://www.surgeongeneral.gov/topics/obesity/calltoaction/CalltoAction.pdf>.

⁴ CENTERS FOR DISEASE CONTROL AND PREVENTION (CDC), U.S. DEP'T OF HEALTH & HUMAN SERVS., U.S. OBESITY TRENDS 1985-2005, <http://www.cdc.gov/nccdphp/dnpa/obesity/trend/maps/index.htm>.

⁵ CAL. DEP'T OF HEALTH SERVS., FINDINGS FROM THE 1999 CALIFORNIA CHILDREN'S HEALTHY EATING AND EXERCISE PRACTICES SURVEY (2004), <http://www.dhs.ca.gov/ps/cdic/cpns/research/download/calcheeps/CalCHEEPS-Low.pdf>.

Obesity is Epidemic in the U.S.



6. According to the California Health Interview Survey (CHIS), San Francisco mirrors the national trends. In 2001, 39.7% of San Franciscans were overweight or obese. By 2005, the percentage increased to 42.6%.⁶ Latino and African American individuals in San Francisco face particularly high obesity rates.⁷

7. San Francisco children are also impacted by this health crisis. According to data from 2004, 24% of school-age children in San Francisco are overweight.⁸ According to the 2005 Youth Risk Behavior Survey for the San Francisco Unified School District, 10.5% of high school students are overweight and 13.3% are at risk for becoming overweight. Researchers note that 50% of children who are overweight remain overweight as adults, contributing to increased cases of diabetes, heart disease and other chronic diseases.⁹

⁶ UCLA CTR. FOR HEALTH POLICY RESEARCH, 2005 CALIFORNIA HEALTH INTERVIEW SURVEY, <http://www.chis.ucla.edu/>.

⁷ *Id.*

⁸ CAL. CTR. FOR PUB. HEALTH ADVOCACY, THE GROWING EPIDEMIC: CHILD OVERWEIGHT RATES IN CALIFORNIA'S 10 LARGEST CITIES (2004), http://www.publichealthadvocacy.org/research_pdfs/10cities.pdf.

⁹ UNIV. OF CAL., AGRIC. & NATURAL RES., NUTRITION ONLINE MEDIA KIT, FACT SHEET, <http://news.ucanr.org/mediakits/nutrition/nutritionfactsheet.shtml> (citing Univ. of Cal., Berkeley, (continued on next page)

8. On March 18, 2008, after receiving overwhelming support for the proposal in the public comment period, the San Francisco Board of Supervisors voted unanimously to adopt Ordinance 40-08 ("the Ordinance"). The Ordinance mandates that chain restaurants with 20 or more locations in California provide nutrition information on menus and menu boards to enable the citizens of San Francisco to make more informed dining choices. The Mayor signed the Ordinance into law on March 24, 2008.

9. The Department and I support the Menu Labeling Ordinance because it will give residents of San Francisco the information they need to make healthy choices to prevent and/or manage chronic diseases associated with being overweight. San Francisco is facing an obesity crisis. This information is sorely needed and not presently available to most consumers. By mandating that restaurants post nutritional information on menus and menu boards, Ordinance 40-08 will allow San Francisco residents dining in chain restaurants to make more informed choices that can decrease their risk of the severe negative health effects associated with being overweight. It will also likely lead restaurants to reformulate their menus to include healthier options. These issues are discussed in greater detail below, as are the specific contentions made in the declarations from McDonald's, Burger King, and T.G.I. Friday's submitted by CRA.

OBESITY AND EXCESS WEIGHT CAUSE A WIDE RANGE OF SERIOUS HEALTH PROBLEMS FOR SAN FRANCISCO ADULTS AND CHILDREN

10. The health problems associated with being overweight have caused a public health crisis in San Francisco. Overweight or obese individuals are at increased risk for type 2 diabetes, heart disease, stroke, arthritis, gall bladder disease, osteoarthritis, sleep apnea, respiratory problems, depression, and colon, breast, endometrial, and prostate cancers. Obesity and overweight are associated with large decreases in life expectancy.¹⁰ In fact, due to the rapid increase in obesity,

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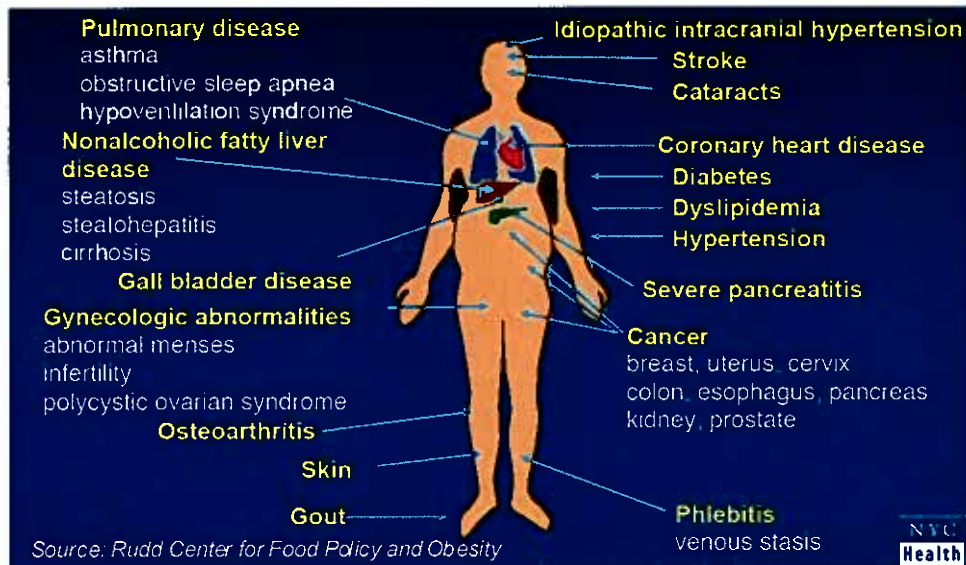
Cooperative Extension, Dep't of Nutritional Sci., *Childhood Overweight, A Fact Sheet for Professionals* (2000)).

¹⁰ Peeters A. Barendt JJ, Willekens F. Mackenbach JP, Marmun A, Bonneux L. Overweight and obesity by middle age are associated with shortened lifespan. *Annals of Internal Medicine*. 2003; 24-32.

today's children may – for the first time in modern history – have shorter lives than their parents.¹¹ According to the Surgeon General: “Unhealthy dietary habits and sedentary behavior together account for approximately 300,000 deaths every year.”¹² A 2005 study by the Centers for Disease Control and Prevention (CDC) estimated that approximately 112,000 deaths are associated with obesity each year in the United States, making obesity the second leading contributor to premature death, behind only tobacco.¹³

Medical Complications of Obesity

Almost every organ system is affected



11. Based on a recent analysis of premature mortality in San Francisco¹⁴ and estimates of fractions of premature mortality attributable to overweight,¹⁵ being overweight ranks as the second

¹¹ Olshansky SJ, Passaro DJ, Hershow RC, et al., A Potential Decline In Life Expectancy In The United States In The 21st Century, *New England Journal of Medicine*, March 17, 2005; 352(11):1138-1145.

¹² U.S. Department of Health and Human Services. The Surgeon General's call to action to prevent and decrease overweight and obesity. [Rockville, MD]: U.S. Department of Health and Human Services, Public Health Service, Office of the Surgeon General; [2001].

¹³ Flegal K, Graubard B, Williamson D, Gail M, Excess Deaths Associated with Underweight, Overweight, and Obesity, *Journal of the American Medical Association*. 293: 1861, 1861-67 (2005).

¹⁴ Aragón TJ, Lichtensztajn DY, Katcher BS, Reiter R, Katz MH., Calculating Expected Years Of Life Lost To Rank The Leading Causes Of Premature Death In San Francisco, San Francisco Department of Public Health (July 24, 2007), http://www.sfdph.org/dph/files/reports/StudiesData/CHE_Rpt07242007C.pdf.

leading cause of premature mortality among females and the third leading cause among males in San Francisco. As the following chart illustrates, nearly all of the top causes of premature death in San Francisco are attributable at least in part to poor diet and lack of exercise.

						Attributable in part to Diet/ Exercise
Rank	Underlying cause of death	YLLs	Deaths	Average YLL		
Male					•	•
1	Ischemic heart disease	9,854	1,103	8.9	•	●
2	HIV/AIDS	6,465	319	20.3	•	•
3	Lung, bronchus, and trachea cancers	4,134	387	10.7	•	●
4	Cerebrovascular disease	3,420	418	8.2	•	●
5	Hypertensive heart disease	3,379	287	11.8	•	●●
Female					•	•
1	Ischemic heart disease	6,721	1,017	6.6	•	●
2	Cerebrovascular disease	4,221	614	6.9	•	●
3	Lung, bronchus, and trachea cancers	3,376	326	10.4	•	●
4	Breast Cancer	2,975	222	13.4	•	●
5	Hypertensive heart disease	2,215	269	8.2	•	●●

YLL = Years of Life Lost (measure of premature mortality)

•• = Percent attributable to diet and exercise estimated to be greater than 40%

• = Percent attributable to diet and exercise estimated to be between 10% and 40%

Source: analysis by SFDPH, Community Health Epidemiology,
using state death statistical master files

Roughly a quarter of premature mortality in San Francisco from ischemic heart disease, approximately half of premature mortality from hypertensive heart disease, and nearly three-quarters of premature mortality from diabetes can be attributed to being overweight. Being overweight is also an important cause of premature mortality from stroke, diabetes, colon cancer, and breast cancer in

(footnote continued from previous page)

¹⁵ Ezzati M, Vander Hoorn S, Lopez AD, Danaei G, Rodgers A, Mathers CD, *et al.*, Comparative Quantification Of Mortality And Burden Of Disease Attributable To Selected Risk Factors, GLOBAL BURDEN OF DISEASE AND RISK FACTORS, 241-396 (1st ed. 2006).

1 San Francisco. Excess weight contributes to high blood pressure, which affects 23% of San
 2 Franciscans, and high cholesterol, which affects 20% of San Franciscans.¹⁶

3 12. Having excess sodium or saturated fat in one's diet also causes health problems. An
 4 estimated 23% of San Franciscans have high blood pressure, which requires them to limit their
 5 sodium intake. In addition, 20% of San Franciscans have high cholesterol and are advised to reduce
 6 their intake of saturated fat.

7 **A. The Related Epidemics of Obesity and Diabetes Cause Devastating Health**
 8 **Consequences**

9 13. Increasing obesity rates have led to increasing diabetes rates. Indeed, being
 10 overweight or obese is the main risk factor for diabetes.

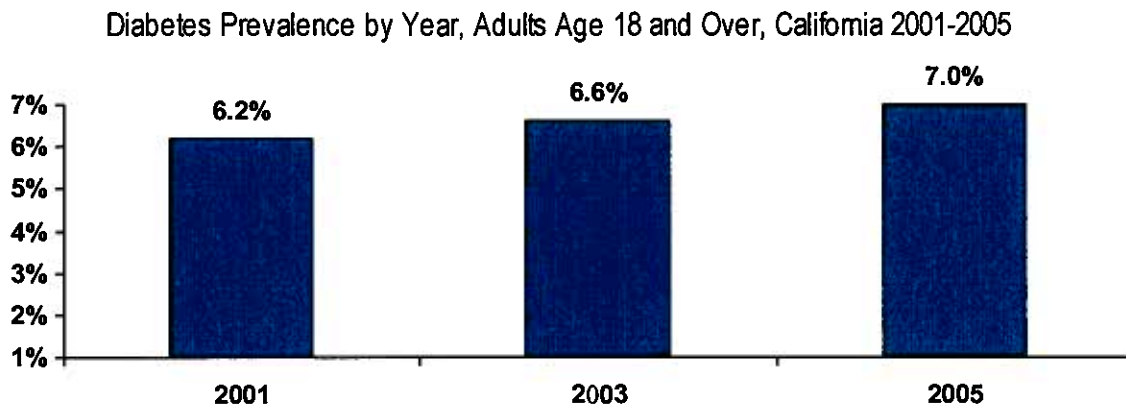
11 14. As of 2005, 15.8 million Americans had diabetes, almost triple the number from
 12 1980.¹⁷ Between 50% and 80% of diabetes cases are associated with obesity, unhealthy eating and
 13 physical inactivity.¹⁸ There has been a steady rise of diabetes in California in recent years. In 2001,
 14 the prevalence of diabetes among adults over 18 years old was 1.5 million or 6.2%. In 2005, over 1.8
 15 million people (7.0%) have been diagnosed with diabetes.¹⁹

16 ¹⁶ UCLA CTR. FOR HEALTH POLICY RESEARCH, 2005 CALIFORNIA HEALTH INTERVIEW
 17 SURVEY, <http://www.chis.ucla.edu/>.

18 ¹⁷ NAT'L CTR. FOR HEALTH STATISTICS, CDC, NAT'L DIABETES SURVEILLANCE SYSTEM,
 19 PREVALENCE OF DIABETES (1980-2005),
 20 <http://www.cdc.gov/diabetes/statistics/prev/national/tablepersons.htm>.

21 ¹⁸ Hu FB, Manson JE, Stampfer MJ, Colditz G, Liu S, Solomon CG, Willett WC, Diet,
 22 lifestyle, and the risk of type 2 diabetes mellitus in women. *New England Journal of Medicine*. 2001;
 23 345:790-797 (2001).

24 ¹⁹ UCLA CTR. FOR HEALTH POLICY RESEARCH, 2005 CALIFORNIA HEALTH INTERVIEW
 25 SURVEY, <http://www.chis.ucla.edu/>.



Source: 2001, 2003, 2005 California Health Interview Surveys.

15. In San Francisco, approximately 6.3% of adults age 18 or older have been diagnosed with diabetes. According to the most recent data available, 16% of African Americans in San Francisco have been diagnosed with diabetes.²⁰

16. Diabetes has devastating consequences. According to data from 2004, diabetes is the ninth leading cause of premature death in San Francisco. Diabetes was also a contributing cause in 442 deaths in 2000 and 441 deaths in 2004 in the City.

²⁰ UCLA CTR. FOR HEALTH POLICY RESEARCH, 2005 CALIFORNIA HEALTH INTERVIEW SURVEY, <http://www.chis.ucla.edu/>.

Rank	Cause	Deaths	Crude Rate	Age-Adjusted		
				Rate	Rate LCI	UCI
1	1 Isch.heart dis.	1,056	133.4	112.0	92.3	134.7
2	2 Cerebrovasc.dis	504	63.7	53.1	39.8	69.3
3	3 Trach/Bronch/lung Cancer	361	45.6	40.9	29.3	55.4
4	4 Hypten.heart dis.	233	29.4	25.7	16.8	37.7
5	5 Low.Respir.Infec.	248	31.3	25.5	16.6	37.4
6	6 COPD	226	28.5	24.4	15.7	36.3
7	7 Alzheimer/oth.demen.dis.	234	29.6	23.0	14.6	34.5
8	8 HIV/AIDS	178	22.5	19.6	12.2	29.8
9	9 Diabetes	143	18.1	15.7	8.9	25.5
10	10 Colon/rect.cancer	136	17.2	15.1	8.5	24.9
11	11 Breast Cancer	110	13.9	12.4	6.6	21.4
12	12 Self-inflict.Injur.	101	12.8	11.2	5.8	19.7
13	13 Liver Cancer	95	12.0	11.0	5.5	19.7
14	14 Lymphoma/Mult.myel.	93	11.7	10.4	5.1	18.9
15	15 Pancreas Cancer	92	11.6	10.3	5.0	18.8

Data sources: Ca. Dept. of Health Services, death master statistical file; Ca. Dept. of Finance, population projections

Deaths are San Francisco resident deaths. Rates are per 100,000 population.

Age adjusted rates are age-adjusted to standard US 2000 pop.

B. Obesity And Diabetes Are Responsible for Soaring Health Care Costs

17. Obesity and diabetes are generating extraordinary financial costs in the United States and in San Francisco. Between 1987 and 2001, rising obesity rates and obesity related illnesses accounted for more than one-quarter of the growth in health care spending in the United States.²¹ A 2002 study by the American Diabetes Association estimates that direct and indirect costs of diabetes were \$132 billion, which means that one out of every ten health care dollars spent in the U.S. is spent on diabetes and its complications.²² These sums are far larger if other obesity-related diseases and lost productivity are taken into account. Health care spending among people who are obese has been estimated to be 37% higher than among those with normal weight, and increases in the proportion of

²¹ Thorpe KE, Florence CS, Howard DH, Joski P. The Impact of Obesity on Rising Medical Spending. *Health Affairs (Millwood)* 2004 Jul-Dec; Suppl Web Exclusives:W4-480-6.

²² American Diabetes Assn., Economic Costs of Diabetes in the U.S. in 2002, *Diabetes Care* 23:3 (March 2003).

1 and spending on obese people relative to people of normal weight accounted for 27% of the rise in
2 inflation-adjusted per capita health care spending between 1987 and 2001.²³

3 18. Diabetes also costs state and local governments huge sums. The Juvenile Diabetes
4 Research Foundation International estimated that diabetes cost California alone about \$20.4 billion in
5 2004 in direct and indirect costs. In 2005, San Francisco General Hospital spent approximately \$25
6 million treating patients who presented with diabetes as their primary condition.

7 19. According to the California Department of Health Services, the obesity epidemic cost
8 the private and public sectors in California an estimated \$28 *billion* in direct medical expenses,
9 workers' compensation, and lost productivity in 2005.²⁴ In San Francisco, the epidemic costs an
10 estimated \$192 million a year in medical expenses, lost productivity and workers' compensation. In
11 fact, the Department alone spends an estimated \$15.5 million a year treating obesity-related
12 conditions.

13 **THE OBESITY EPIDEMIC IS CAUSED BY EXCESS CALORIC CONSUMPTION**

14 20. Experts agree that the extraordinarily rapid population-level weight gain that has
15 occurred over the past three decades is a result of our changing diet, rather than genetics. The food
16 industry in the U.S. encourages over-consumption of calories through increasingly large portions of
17 foods and beverages that are energy-dense, easily available, and inexpensive.²⁵

18 21. While increasing weight results from an imbalance between calories consumed
19 (nutrition) and energy expended (physical activity), it is clear that "rising obesity is primarily the
20

21
22
23 ²³ Thorpe KE, Florence CS, Howard DH, Joski P. The Impact of Obesity on Rising Medical
24 Spending. Health Affairs (Millwood). 2004 Jul-Dec; Suppl Web Exclusives:W4-480-6.

25 ²⁴ CAL. DEP'T OF HEALTH SERVS., THE ECONOMIC COSTS OF PHYSICAL INACTIVITY, OBESITY,
26 AND OVERWEIGHT IN CALIFORNIA ADULTS: HEALTH CARE, WORKERS' COMPENSATION, AND LOST
PRODUCTIVITY (2005),
<http://www.dhs.ca.gov/cdic/cpns/press/downloads/costofObesityToplineReport.pdf>.

27 ²⁵ Hill JO, Wyatt HR, Reed GW, Peters JC, Obesity and the Environment: Where Do We Go
28 from Here?, *Science* 2003; 299 (5608):853-5.

1 result of consuming more calories."²⁶ Unburned calories are stored as fat, regardless of whether the
 2 calories come from fats, carbohydrates or proteins.²⁷

3 22. For this reason, calories are recognized as the most important element of nutrition
 4 information needed to address the obesity epidemic. Contrary to McDonald's claim that "[e]mphasis
 5 on calorie intake . . . may not contribute towards the maintenance of a healthy body weight," *see*
 6 DeMuth Dec. ¶ 8, the FDA and other nutrition experts agree that "calorie information is *most* relevant
 7 to obesity prevention."²⁸ FDA's Obesity Working Group concluded in 2004, "a focus on total calories
 8 is *the most useful single piece of information* in relation to managing weight."²⁹

9 23. Even modest reductions in calorie intake can dramatically improve health. A
 10 reduction of 300 calories twice per week (the difference between a large diet and a sugar-sweetened
 11 soda) could result in a weight loss of more than 8 pounds in a year. This is equivalent to the weight
 12 loss documented in a landmark study which found that progression to diabetes from pre-diabetes was
 13 reduced by 58% in people who underwent moderate weight loss and modest increases in physical
 14 activity.³⁰

15 24. Ordinance 40-08 aims to increase awareness of calorie intake by making calorie
 16 information available on menu boards. It also requires three additional pieces of information on
 17 menus: saturated fat, carbohydrates, and sodium. Contrary to the many claims in the declarations
 18 submitted in support of CRA's motion and to the arguments in CRA's Memorandum of Points and
 19

20 ²⁶ Bleich S, Cutler D, Murray C, Adams A. Why is the developed world obese? NBER
 Working Paper # 12954; 2007, <http://www.nber.org/papers/w12954>.

21 ²⁷ When calorie consumption decreases, for example through a reduction in portion size,
 22 reduction in other unhealthy nutrients, such as saturated fat or sodium, also frequently occur, as
 evidenced by the chains own published information for varying portion sizes. *See* McDonald's
 Nutrition Facts, http://www.mcdonalds.com/app_controller.nutrition.index1.html.

23 ²⁸ The Keystone Forum on Away-From-Home Foods: Opportunities for Preventing Weight
 24 Gain and Obesity, Final Report (May 2006) ("Keystone Report"), at 80 (emphasis added), Pl.
 Appendix F.

25 ²⁹ U.S. FOOD AND DRUG ADMINISTRATION (FDA), CALORIES COUNT: REPORT OF THE
 26 WORKING GROUP ON OBESITY (2004), at Part V(B) <http://www.cfsan.fda.gov/~dms/owg-toc.html>
 ("FDA Calories Count Report") (emphasis added).

27 ³⁰ Diabetes Prevention Program Research Group. Reduction in the Incidence of Type 2
 28 Diabetes with Lifestyle Intervention or Metformin. *Journal of Medicine* 2002; 346: 393-403.

Authorities, restaurants are *in no way prevented* by San Francisco's Menu Labeling Ordinance from providing additional nutrient information to their customers on menu boards. Ordinance 40-08 sets a floor for the nutritional information chain restaurants must provide, not a ceiling.

THE RISE IN OBESITY HAS COINCIDED WITH AN INCREASE IN EATING AWAY FROM HOME

A. Americans Are Consuming An Increasing Portion Of Their Calories From Restaurant Food

25. The rise in obesity rates in the United States has coincided with the increased consumption of away-from-home foods. Eating out, and eating extra calories while eating out, contributes disproportionately to the excess calorie intake that fuels the obesity epidemic.³¹

26. Whereas in 1970 Americans spent just 26% of their food budget on food prepared away from home, they now spend almost half (46%) of their food dollars on such items. In 1994-1996, the average American consumed about one third of their calories from foods prepared outside of the home, up from 18% less than 20 years earlier.³²

27. The increasing number of chain restaurants, which serve food that is easily available, inexpensive and high in calories, has facilitated this trend. Between 2005 and 2009, the number of fast food establishments is projected to increase from 266,300 to 287,437 establishments.³³ Of the approximately 4,500 restaurants in San Francisco, an estimated 372, or 12%, are chain restaurants that are subject to the requirements of Ordinance 40-08.

28. Fast food has become a staple of the American diet. An estimated 30% of children between the age of four and nineteen eat fast food on a typical day.³⁴ On average, children and youth

³¹ St-Onge MP, Keller KL, Heymsfield SB. Changes in childhood food consumption patterns: a cause for concern in light of increasing body weights. *American Journal of Clinical Nutrition* 2003; 78:1068-1073; French SA, Harnack L, Jeffery RW. Fast food restaurant use among women in the Pound of Prevention study: dietary, behavioral and demographic correlates. *International Journal of Obesity* 2000; 24:1353-1359.

³² Guthrie JF. et al. Role of Food Prepared Away from Home in the American Diet, 1977-78 Versus 1994-96: Changes and Consequences. *Society for Nutrition Education* 2002; 34:140-150.

³³ C. Barnes & Co. 2008 Barnes Reports: U.S. Fast Foods Restaurants Industry (NAICS 72221). 2007.

³⁴ Bowman, S.A., Gortmaker, S.L., Ebbeling, C.B., Pereira, M.A., Ludwig, D.S. 2004. Effects of fast food consumption on energy intake and diet quality among children in a National Household (continued on next page)

aged 11-18 visit fast food outlets twice per week.³⁵ In addition, 37% of adults report eating in fast food establishments.³⁶

B. Away-From-Home Meals Such As Those Served At Chain Restaurants Have Larger Portions, More Calories, And Lower Nutritional Value Than Meals Prepared At Home

29. Studies have documented patterns of increasing portion sizes, particularly at fast-chain restaurants, since the 1970s, in a pattern that parallels the epidemic of obesity.³⁷ On average, portion sizes and calories increased for soft drinks by 49 calories, for French fries by 68 calories, and for hamburgers by 97 calories per serving.³⁸ Because even small changes, such as eating just 10 more calories per day over the course of a year, can result in weight gain of one pound, the potential impact of increases in portion size ranging from 50 to 100 calories is dramatic.

30. Meals eaten away from home are associated with increased calorie intake. Despite Dr. Allison's allegation that the "evidence submitted in favor of the unique role of restaurants as contributing to the obesity epidemic is strictly observational, and more importantly, equivocal," the

(footnote continued from previous page)

Survey. *Journal of Pediatrics*. 113(1): 112-118., <http://pediatrics.aappublications.org/cgi/reprint/113/1/112>.

³⁵ UNIV. OF CAL., AGRIC. & NATURAL RES., NUTRITION ONLINE MEDIA KIT, FACT SHEET, <http://news.ucanr.org/mediakits/nutrition/nutritionfactsheet.shtml> (citing *Inst. of Med., Preventing Childhood Obesity: Health in the Balance* (2005)).

³⁶ Paeratakul S, Ferdinand D, Champagne C, Ryan D, Bray G. Fast-Food Consumption Among U.S. Adults and Children: Dietary and Nutrient Intake Profile, *Journal of the American Dietetic Association*. 103: 1332-1338 (2003).

³⁷ Nielsen, S. J., and B. M. Popkin. Patterns and trends in food portion sizes, 1977-1998. *Journal of the American Medical Association*. 2003; 289(4):450-453; Young, L. R. and M. Nestle. The Contribution of Expanding Portion Sizes to the US Obesity Epidemic. *American Journal of Public Health* 2002; 92(2):246-249; Guthrie, J. F., B. H. Lin, and E. Frazao. Role of food prepared away from home in the American diet, 1977-78 versus 1994-96: Changes and consequences. *Journal of Nutrition Education and Behavior* 2002; Ello-Martin, J. A., J. H. Ledikwe, and B. J. Rolls. The Influence of Food Portion Size and Energy Density on Energy Intake: Implications for Weight Management. *The American Journal of Clinical Nutrition* 2005; 82(1 Suppl.):236S-241S.34(3):140-150; Young L.R. and Nestle M. Portion Sizes and Obesity: Responses of Fast-Food Companies. *Journal of Public Health Policy* 2007; 28: 238-248.

³⁸ Nielsen, S. J., and B. M. Popkin. Patterns and trends in food portion sizes, 1977-1998. *Journal of the American Medical Association*. 2003; 289(4):450-453.

evidence that restaurant and fast food are the fastest growing component of the national increase in caloric intake is incontrovertible.

31. The nationwide Food Consumption Survey revealed that energy (calorie) intake from restaurant/fast food as a percentage of total energy intake doubled (+90%) between 1977 and 1996, as national caloric intake increased for Americans by nearly 200 calories per day, from 1,791 to 1,983 calories. Restaurants and fast food were the fastest growing source of calories in this period, while calories from food at home fell.³⁹ Indeed, the report by the FDA-commissioned Keystone Forum on Away-From-Home Foods ("Keystone Report") observed that "[e]ating out more frequently is associated with obesity, higher body fatness, and higher body mass index."⁴⁰ Children eat almost twice (1.8 times) as many calories when eating out than when eating at home.⁴¹

32. Numerous studies show that people who eat at fast food establishments consume more calories. A 1994-1996 survey of 17,370 adults and children found that adults who ate at fast food restaurants consumed 205 more calories per day than those who did not, and children ate 155 more calories.⁴² In a survey of more than 9,000 adults, mean caloric intake on days when fast food was consumed was 206 calories higher than on other days.⁴³ This increase in calories would result in a three-pound weight gain each year if a consumer were to eat fast food only once each week. Similarly, in a study of nearly 900 women, increased frequency of eating at fast food restaurants was

³⁹ Nielsen SJ, Siega-Riz AM, Popkin BM. Trends in energy intake in the United States between 1977-1996: Similar shifts seen across all age groups. *Obesity Research* 10:370-378 (2002)

⁴⁰ Keystone Report (Pl. Appendix F), at 27; see also Kant, AK & Graubard, BI. Eating out in America, 1987-2000: Trends and Nutritional Correlates. *Preventive Medicine* 2004;38:243-249 (Analysis of data from the 1987 and 1992 National Health Interview Surveys (NHIS) and the 1999-2000 National Health and Nutrition Examination Survey (NHANES) found that the number of meals eaten out was associated with eating more calories, total fat and saturated fat. Eating out also was associated with higher BMIs in women.)

⁴¹ Zoumas-Morse C, Rock C, Sobo E, Neuhouser M. Children's patterns of macronutrient intake and associations with restaurants and home eating. *Journal of the American Dietetic Association* 2001; 101(8):923-925.

⁴² Paeratakul S, Perdinand D, Champagne C, Ryan D, Bray G. Fast-food consumption among US adults and children: dietary and nutrient intake profile. *Journal of American Dietetic Association* 2003; 103(10):1332-1338.

⁴³ Bowman S, Vinyard B. Fast food consumption of US adults: impact on energy and nutrient intakes and overweight status. *Journal of the American College of Nutrition* 2004; 23(2):163-168.

1 associated with higher total calorie intake.⁴⁴ This association has also been shown among adolescents
 2 and children. A study of 4,746 students age 11-18 years found that regular fast food consumption
 3 was associated with 800 extra calories per week in boys and 660 extra calories per week in girls.⁴⁵
 4 Such calorie excess could translate into a weight gain of 10 pounds or more per year. An increase of
 5 129 calories per day among high- versus low-frequency consumers of fast food was also reported in a
 6 large national cohort of adolescent girls.⁴⁶

7 33. Fast food consumption translates into an increase in body weight in both adults and
 8 children.⁴⁷ In a study of more than 9,000 adults, eating fast food increased the prevalence of
 9

10 ⁴⁴ French SA, Harnack L, Jeffery RW. Fast food restaurant use among women in the Pound
 11 of Prevention study: dietary, behavioral and demographic correlates. *International Journal of*
 12 *Obesity* 2000; 24:1353-1359 see also Kruger, J et al. Dietary Practices, Dining Out Behavior and
 13 Physical Activity Correlates of Weight Loss Maintenance. *Preventing Chronic Disease: Public*
 14 *Health Research, Practice, and Policy* 2008;5:1-14 (A survey of adults found that people who did not
 15 eat at fast-food restaurants were more successful at maintaining their weight loss than people who ate
 16 at fast-food restaurants two or more times a week).

17 ⁴⁵ French SA, Story M, Neumark-Sztainer D, Fulkerson JA & Hannan P. Fast food restaurant
 18 use among adolescents: associations with nutrient intake, food choices and behavioral and
 19 psychosocial variables. *International Journal of Obesity*, 2001; 25: 1823-33.

20 ⁴⁶ Schmidt M, Affenito SG, Striega-Moore R, Khoury PR, Barton B, Crawford P, Kronsberg
 21 S, Schreiber G, Obarzanek E, Daniels S. Fast-food intake and diet quality in black and white girls:
 22 the National Heart, Lung, and Blood Institute Growth and Health Study. *Archives of Pediatrics &*
 23 *Adolescent Medicine* 2005; 159(7):626-631.

24 ⁴⁷ Duffey KJ, Gordon-Larsen P, Jacobs DR, Williams OD & Popkin BM. Differential
 25 associations of fast food and restaurant food consumption with 3-y change in body mass index: the
 26 Coronary Artery Risk Development in Young Adults Study. *American Journal of Clinical Nutrition*
 27 2007; 85:201-208; French SA, Harnack L, Jeffery RW. Fast food restaurant use among women in the
 28 Pound of Prevention study: dietary, behavioral and demographic correlates. *International Journal of*
 29 *Obesity* 2000; 24:1353-1359; Niemeier H, Raynor H, Lloyd-Richardson E, Rogers M, Wing R. Fast
 30 food consumption and breakfast skipping: predictors of weight gain from adolescence to adulthood in
 31 a nationally representative sample. *Journal of Adolescent Health* 2006; 39:842-849; Pereira MA,
 32 Kartashov AI, Ebberling CB, VanHorn L, Slattery ML, Jacobs DR & Ludwig DS. Fast-food habits,
 33 weight gain, and insulin resistance (the CARDIA study): 15-year prospective analysis. *Lancet* 2005;
 34 Thompson OM, Ballew C, Resnicow K, Must A, Bandini LG, Cyr H, Dietz WH. Food purchased
 35 away from home as a predictor of change in BMI z-score among girls. *International Journal of*
 36 *Obesity* 2004; 28:282-289.365:36-42; Satia JA, Galanko JA, Siega-Riz AM, Eating at fast food
 37 restaurants is associated with dietary intake, demographic, psychosocial and behavioral and
 38 behavioral factors among African Americans in North Carolina. *Public Health Nutrition*: 7(8), 1089-
 39 1096; Guthrie JF. et al. Role of Food Prepared Away from Home in the American Diet, 1977-78
 40 Versus 1994-96: Changes and Consequences. *Journal of Nutrition Education and Behavior*. 2002;
 41 34(3):140-150; Binkley, UK, Eales J, Jekanowski M, The relation between dietary change and rising
 42 US obesity. *International Journal of Obesity* (2000) 24, 1032-1039.

overweight by 27-31%.⁴⁸ Among 3,394 adults in the Coronary Artery Risk Development in Young Adults Study (CARDIA), eating fast food was positively associated with a higher Body Mass Index (BMI), a key measure of obesity. This same association has been found in different contexts, such as among Mexican children in San Diego, where 4-7-year-old children were twice as likely to be obese if they ate in fast food restaurants,⁴⁹ and among Minnesota secondary school students.⁵⁰ Follow-up studies further strengthen the evidence for a causal association between eating fast food and weight gain. In a study of 3,031 adults (part of CARDIA) who were followed up for 15 years, baseline fast food intake was directly associated with increases in body weight.⁵¹ Similarly, in a study of almost 10,000 adolescents, more days of fast food consumption at baseline predicted increases in BMI at five-year follow-up.⁵² In a cross-sectional study of boys and girls in three age groups, those aged 12-19 years who consumed foods away from home were more likely to have a higher BMI percentile.⁵³

34. Sit-down chains also serve food associated with increased caloric intake and weight gain. One study compared food selections made by adolescents who were asked to order a dinner meal from both sit-down chain restaurants and fast food restaurants. Meals selected at Chili's,

⁴⁸ Bowman S, Vinyard B. Fast food consumption of US adults: impact on energy and nutrient intakes and overweight status. *Journal of the American College of Nutrition* 2004; 23(2):163-168

⁴⁹ Duerksen SC, Elder JP, Arredondo EM, Ayala GX, Slymen DJ, Campbell NR, Baquero B. Family restaurant choices are associated with child and adult overweight status in Mexican-American families. *Journal of the American Dietetic Association* 2007; 107(5): 849-853.

⁵⁰ French SA, Story M, Neumark-Sztainer D, Fulkerson JA & Hannan P. Fast food restaurant use among adolescents: associations with nutrient intake, food choices and behavioral and psychosocial variables. *International Journal of Obesity*, 2001; 25: 1823-33.

⁵¹ Pereira MA, Kartashov AI, Ebberling CB, VanHorn L, Slattery ML, Jacobs DR & Ludwig DS. Fast-food habits, weight gain, and insulin resistance (the CARDIA study): 15-year prospective analysis. *Lancet* 2005; 365:36-42

⁵² Niemeier H, Raynor H, Lloyd-Richardson E, Rogers M, Wing R. Fast food consumption and breakfast skipping: predictors of weight gain from adolescence to adulthood in a nationally representative sample. *Journal of Adolescent Health* 2006; 39:842-849.

⁵³ Huang TT, Howarth NC, Lin BH, Roberts SB & McCrory MA. Energy intake and meal portions: associations with BMI percentile in US Children. *Obesity Research* 2004; 12 (11): 1875-1885

1 Denny's and Outback Steakhouse had even higher calorie content than at comparison restaurants
2 McDonald's and Taco Bell.⁵⁴

3 35. Evidence also shows that eating meals away from home is associated with having a
4 poor diet. The United States Department of Agriculture has observed that away-from-home foods
5 have lower nutritional quality than home foods.⁵⁵ Eating fast food is associated with lower fruit and
6 vegetable consumption and greater consumption of sweetened beverages.⁵⁶ Generally, individuals
7 who eat fast foods consume more calories and have poorer diet quality than those who do not.⁵⁷

8 **CONSUMERS CONSISTENTLY UNDERESTIMATE THE NUMBER OF CALORIES, FAT,
9 CARBOHYDRATES, AND SODIUM CONTAINED IN RESTAURANT MEALS**

10 36. While Americans are eating out more than ever before and restaurant foods tend to
11 have higher calorie counts than home-cooked meals, consumers consistently underestimate the
12 number of calories in menu items.⁵⁸ As the FDA-commissioned Keystone Report concluded,

13 ⁵⁴ Yamamoto JA, Yamamoto JB, Yamamoto BE, Yamamoto LG. Adolescent calorie/fat menu
14 ordering at fast food restaurants compared to other restaurants. *Hawaii Medical Journal*. 2006
15 Aug;65(8):231-6

16 ⁵⁵ See Lin B, et al., Away-From-Home Foods Increasingly Important to Quality of American
17 Diet. U.S. Dep't of Agric., Econ. Research Serv., Agriculture Info. Bull. No. 749 (1999),
18 <http://www.ers.usda.gov/publications/aib749/aib749.pdf>.

19 ⁵⁶ Taveras EM, Berkey CS, Rifas-Shiman SL, et al., Association of Consumption of Fried
20 Food Away from Home with Body Mass Index and Diet Quality in Older Children and Adolescents,
21 *Pediatrics*, Oct. 2005; 116(4): e518-524; Crawford, D et al. Which Food-related Behaviors Are
22 Associated with Healthier Intakes of Fruits and Vegetables among Women?. *Public Health Nutrition*
23 2007;10:256-265 (A cross-sectional survey found that Australian women who ate meals from fast-
24 food restaurants were less likely to eat two or more servings of vegetables and two or more servings
25 of fruit a day.);

26 ⁵⁷ See Bowman, S.A., Gortmaker, S.L., Ebbeling, C.B., Pereira, M.A., Ludwig, D.S. 2004.
27 Effects of fast food consumption on energy intake and diet quality among children in a National
28 Household Survey. *Journal of Pediatrics*. 113(1): 112-118,
<http://pediatrics.aappublications.org/cgi/reprint/113/1/112>. (concluding that children who ate fast
food consumed more calories per gram of food and had poorer diet quality); Paeratakul S, Ferdinand
D, Champagne C, Ryan D, Bray G. Fast-Food Consumption Among U.S. Adults and Children:
Dietary and Nutrient Intake Profile, *J. of the Am. Dietetic Ass'n* 103: 1332-1338 (2003) (concluding
that adults who reported eating fast foods had higher intakes of calories and fat, and lower intakes of
vitamins A and C than adults who did not eat fast food); M. Schmidt, et al., Fast-Food Intake and Diet
Quality in Black and White Girls, *Archives Of Pediatric And Adolescent Medicine*. 159: 626-631
(2004) (concluding that fast food intake in girls between the ages of 9 and 19 was associated with
increased calorie and fat consumption).

⁵⁸ Burton S, Creyer EH. What consumers don't know can hurt them: Consumer evaluations
and disease risk perceptions of restaurant menu items. *The Journal of Consumer Affairs*. 2004;
38(1):121-145.

1 "[w]ithout nutrition information, consumers typically are unable to assess the caloric content of
2 foods."⁵⁹ Although federally mandated nutrition labeling on food products for sale in supermarkets
3 facilitates inform choice for meals eaten at home, consumers lack such essential information when
4 eating in restaurants. This information gap constitutes a significant barrier to healthy food choices.⁶⁰

5 37. A recent study found that calories in restaurant items were almost *two times* more than
6 what consumers expected.⁶¹ A March 2007 poll conducted in California found that an overwhelming
7 number of Californians are unable to identify fast food and restaurant menu items with the
8 fewest/most calories, salt, or fat.⁶² Moreover, steadily increasing portion sizes in restaurant meals
9 make consumers even more likely to underestimate nutritional content.⁶³

10 38. Even experienced nutrition professionals have difficulty accurately estimating the
11 calorie content of restaurant food. In one study, while these professionals could accurately describe
12 the calories in a cup of milk, they generally underestimated calories in restaurant food by 200 to 600
13 calories. For example, dietitians estimated on average that a typical hamburger with onion rings meal
14 had 865 calories when it actually had 1,550. Given that even experienced professionals in the field of
15 nutrition cannot accurately estimate the calorie content of restaurant foods, consumers are even less
16 likely to do so.⁶⁴

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18 ⁵⁹ Keystone Report (Pl. Appendix F), at 68, 73.

19 ⁶⁰ U.S. Food and Drug Administration (FDA) and Center for Food Safety and Applied
20 Nutrition (CFSAN). Counting Calories: Report of the Working Group on Obesity," 2004.
<http://www.cfsan.fda.gov/~dms/owg-toc.html>.

21 ⁶¹ Burton S, Creyer EH, Kees J, Huggins K. Attacking the obesity epidemic: the potential
22 health benefits of providing nutrition information in restaurants. *American Journal of Public Health*.
2006; 96:1669-1675.

23 ⁶² CAL. CTR. FOR PUB. HEALTH ADVOCACY, Statewide poll of 523 registered California voters
24 conducted on March 20-31, 2007 by Field Research Corp.,
www.publichealthadvocacy.org/menulabelingpoll.html.

25 ⁶³ See Young LR, Nestle M. Expanding Portion Sizes in the U.S. Marketplace: Implications
26 for Nutrition Counseling, *Journal of the American Dietetic Association*. 103: 231, 231-34 (2003);
Brian Wansink, Pierre Chandon P, Meal Size, Not Body Size, Explains Errors in Estimating Calorie
Content of Meals, *Annals of Internal Medicine*. 145: 326, 326-32 (2006).

27 ⁶⁴J. Backstrand, et al., *Fat Chance* (Washington, DC: Center for Science in the Public Interest,
1997).

39. It is difficult for consumers to be able to discern that a far lower calorie option is often available within a group of similar products. For example, calories in cheeseburgers at Burger King vary more than three-fold:

Cheeseburger	330 calories
Whopper Junior with cheese	410 calories
Double Whopper with cheese	990 calories
Triple Whopper with cheese	1,230 calories

A consumer ordering a salad at Burger King with the goal of eating food with fewer calories might be startled to learn that dressing can have more calories than the salad; and the calories can vary two-fold – from 300 to 670 – not counting the croutons:

BK Tendergrill Chicken Garden Salad	240 calories
BK Tendercrisp Chicken Garden salad	400 calories
Ken's Fat Free Ranch Dressing	60 calories
Kens' Honey Mustard Dressing	270 calories

And that calories in McDonald's desserts can vary more than ten-fold:

McDonald's shakes	420-1160 calories
McDonald's hot fudge sundae	330 calories
Fruit and yogurt parfait with granola	160 calories
Vanilla low fat ice cream cone	150 calories
Apple dippers w/ low fat caramel dip	105 calories

**EVIDENCE SHOWS THAT, WHEN GIVEN NUTRITIONAL INFORMATION,
CONSUMER USE THAT INFORMATION TO MAKE LOWER CALORIE AND
HEALTHIER CHOICES**

40. Both common sense and published scientific evidence demonstrate why making nutrition information readily available at the point of purchase will influence many consumers to make lower-calorie, healthier choices.⁶⁵ Since 1994, the federal Nutrition Labeling and Education Act (NLEA) has made nutrition information available to consumers on packaged foods purchased in retail stores. This information is widely used, with three quarters of American adults reporting that

⁶⁵ Burton S, Creyer EH, Kees J, Huggins K. Attacking the obesity epidemic: the potential health benefits of providing nutrition information in restaurants. *American Journal of Public Health*. 2006; 96:1669-1675.

they examine food labels.⁶⁶ The calorie section is the most frequently consulted part of the Nutrition Facts panel on packaged foods, with 73% of consumers reporting that they look at calorie content.⁶⁷ Nearly half (48%) of those who consult the nutrition information on packaged foods report changing their food purchasing habits as a result of reviewing this information.⁶⁸

41. Similarly, consumers are interested in knowing the calorie content of restaurant foods and will use it to make more informed choices. Six nationally representative polls have found that anywhere from 62% to 87% of Americans support requiring restaurants to list nutrition information.⁶⁹ In studies where calorie information is provided, consumers choose high-calorie items 24% to 37% less often.⁷⁰ A 2005 study found that providing nutrition information at the point of sale in campus dining facilities had a positive influence on the food purchasing behavior of college students.⁷¹ Similarly, another study found that signs showing the calorie content of available foods in a cafeteria setting significantly decrease the number of calories that people purchase.⁷²

⁶⁶ US Department of Health and Human Services (US DHHS), Centers for Disease Control and Prevention, National Center for Health Statistics. Healthy People 2000 Final Review. 2001.

⁶⁷ International Food Information Council (IFIC) Foundation. Food & Health Survey: Consumer Attitudes Toward Food, Nutrition & Health. Washington, DC: 2007.

⁶⁸ Levy AS, Derby BM. The Impact of NLEA on Consumers: Recent Findings from FDA's Food Label and Nutrition Tracking System. Washington DC: Center for Food Safety and Applied Nutrition. Food and Drug Administration. 1996.

⁶⁹ Center for Science in the Public Interest. Anyone's Guess: The need for nutrition labeling at fast-food and other chain restaurants. Washington, DC: Center for Science in the Public Interest, 2003; Harvard Forums on Health. Obesity as a Public Health Issue: A Look at Solutions. National Poll by Lake, Snell, Perry & Associates. June 2003.

⁷⁰ Burton S, Creyer EH, Kees J, Huggins K. Attacking the obesity epidemic: the potential health benefits of providing nutrition information in restaurants. *American Journal of Public Health*. 2006; 96:1669-1675. Once again, the DeMuth (McDonald's) declaration does not accurately reflect an authority it cites. Describing the Burton study, she states, "Purchase intent for the more-healthy items was increased only when both calorie plus nutrient information were provided." DeMuth Dec. ¶ 13. Actually, the authors concluded that while calorie information with additional nutritional information affected more choices, calorie information alone had a significant effect on certain consumer purchase intentions.

⁷¹ Conklin MT, Cranage DA, Lambert CU. College students' use of point of selection nutrition information, *Topics in Clinical Nutrition*. 2:20, 97, 97-108 (2005).

⁷² Milich R, Anderson J, Mills M. Effects of visual presentation of caloric values on food buying by normal and obese persons, *Perceptual & Motor Skills*. 1976 Feb;42(1):155-62.

1 42. Most recently, Los Angeles County published a study quantifying the potential impact
2 of mandatory menu labeling at fast food and large chain restaurants. Using a conservative
3 assumption that calorie postings would result in 10% of large chain restaurant patrons ordering
4 reduced calorie meals, with an average reduction of 100 calories per meal, Los Angeles concluded
5 that menu labeling would avert 39% of the 6.75 million pound average annual weight gain in the
6 county population. The Los Angeles study is attached hereto as Exhibit B.

7 43. CRA questions the usefulness of nutritional information if consumers are unaware of
8 their recommended daily calorie intake. Such knowledge, however, is not essential for nutrition
9 labeling to be effective. As noted in the FDA's Keystone Report: "The data collected since the NLEA
10 was implemented in 1994 suggest that people tend to use food label information to compare "like"
11 products, rather than to make selections across product lines."⁷³ Nutritional information provided in
12 restaurants allows consumers to compare meal options and make better selections irrespective of
13 whether they know their daily-recommended intake. For example, a consumer will be able to choose
14 between a small portion of McDonalds fries knowing that it has 250 calories versus a large portion at
15 fries at 570 calories, between its Deluxe Breakfast with syrup at 1,410 calories instead of the Big
16 Breakfast with a regular sized biscuit at 720 calories, or between a large Coke at 310 calories versus a
17 small one for 150 calories or a diet Coke for <1 calorie. Also, CRA ignores that Ordinance 40-08
18 requires restaurants to include the following statement on menus in a clear and conspicuous manner:
19 "Recommended limits for a 2,000 calorie daily diet are 20 grams of saturated fat and 2,300
20 milligrams of sodium." See Health Code Section 468.3(b)(2). Thus, Ordinance 40-08 educates
21 consumers about recommended daily allowances so that they can make more informed choices.

22 44. The argument advanced in the Declaration of Michael Andres (McDonald's) that
23 requiring posting by some and not all restaurants will create a competitive disadvantage for affected
24 restaurants is purely speculative, as is the allegation that these restaurants will lose business. In fact,
25 it is entirely plausible that consumers, who are increasingly choosing foods based on nutritional value
26 or perceptions of healthfulness, will prefer purchasing at restaurants where nutrition information is

27 ⁷³ Keystone Report (Pl. Appendix F), at 72.

1 available. The proposal to require nutrition labeling had widespread support before the Board of
2 Supervisors, and a 2007 study by the California Center for Public Health Advocacy found 84% of
3 respondents support "requiring fast-food and chain restaurants to post nutrition information on their
4 menus."⁷⁴ Given the public support for menu labeling, the availability of nutrition information to
5 consumers may in fact come to be seen as a competitive advantage despite CRA's dire predictions.

6 45. Contrary to the Andres Declaration (McDonald's), which speculates that San
7 Francisco's Menu Labeling Ordinance could cause revenue loss, consumer confusion, and delays in
8 lines, Subway Restaurants has reported no such difficulties since they began posting calorie
9 information on their menu boards in New York City. As part of a Centers for Disease Control and
10 Prevention educational webcast, John Musco, Development Agent for Subway restaurant's Greater
11 New York Region, said this about the calorie posting measure: "We've seen no negative feedback, no
12 loss of sales in our stores because of it. It's been positive."⁷⁵ Subway's experience demonstrates that
13 restaurants can provide nutritional information while still offering clear, attractive and uncluttered
14 menu boards.

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24 ⁷⁴ Cal. Ctr. for Pub. Health Advocacy, Menu Labeling Poll: Californians Overwhelmingly
Support Mandatory Menu Labeling, <http://www.publichealthadvocacy.org/menulabelingpoll.html>.

25 ⁷⁵ Centers for Disease Control and Prevention and University of North Carolina at Chapel Hill
26 School of Public Health. Cutting-Edge Legal Preparedness for Chronic Disease Prevention. Public
Health Grand Rounds [webcast]. November 29, 2007.
27 http://www.publichealthgrandrounds.unc.edu/legal/webcast_hi.htm.

Subway Menu Boards in Place in Manhattan on July 2, 2007⁷⁶

NUTRITION DISCLOSURES IN RESTAURANTS WILL LIKELY LEAD TO THE DEVELOPMENT OF HEALTHIER MENU OFFERINGS

46. In addition to informing consumers, the Department anticipates that requiring nutritional disclosures will motivate the food service industry to improve its menu offerings. According to the FDA-sponsored Keystone Report:

A key benefit of mandatory nutrition labeling on packaged foods has been the reformulation of existing products and the introduction of new, nutritionally improved products. Between 1991 (before the implementation of the NLEA) and 1995 (after implementation) the number of fat-modified cheeses has tripled, and market share for fat-modified cookies increased from zero percent of the market to 15%. In a similar fashion, nutrition labeling on menus and menu boards will likely spur nutritional improvements in restaurant foods.⁷⁷

⁷⁶ Photograph provided by the New York City Department of Health & Mental Hygiene.

⁷⁷ Keystone Report (Pl. Appendix F), at 73.

CURRENT NUTRITION INFORMATION PRACTICES AT CHAIN RESTAURANTS ARE INADEQUATE

47. The current practices of chain restaurants do not effectively transmit nutrition information to consumers. At least 50% of chain restaurants do not make any nutritional information available to customers anywhere.⁷⁸ While CRA has submitted declarations from some that do, only a minuscule proportion of their customers see the nutritional information that is available.

A. Websites And Nutritional Hotlines Are Insufficient To Convey Nutritional Information To Customers

48. According to the declaration of Debra DeMuth, Director of Global Nutrition for McDonald's, McDonald's has over 50 million patrons per day, amounting to 18.3 billion visits per year, but received only 578,000 annual "hits" on their nutrition information website in 2007—presumably including search engine redirects and other spurious hits. Even if we attributed all website hits to customers, this would represent a rate of 0.003% hits per meal (or one hit for every 31,500 meals). Even including all off-site methods described by DeMuth for obtaining nutrition information (578,000 website visits, a projected 48,000 annual calls to the toll free hotline), the use of these sources remains minuscule compared to the number of meals served.

49. Similarly, Burger King's Fiscal 2007 Annual report states that "'Worldwide 11 million guests a day visit a BURGER KING restaurant."⁷⁹ Stephanie Quirantes' declaration notes that the Burger King website receives an average of 78,866 visits a month, while its interactive "Build a Meal" site receives approximately 46,479 visits each month. Further, the linked "Healthy Dining Finder" has received 83,102 hits since March 2007. Even when considering all of these as unique visits by customers (certainly an overestimate) and even assuming that all of the individuals who visit the Burger King website do so to access calorie or nutrition information (highly unlikely), there are *at most* approximately 1.57 million electronic inquiries for nutritional information. This is certainly a large number, but when compared to Burger King's some 4 billion customer visits each year, it

⁷⁸ Wootan MG, Osborn M. Availability of Nutrition Information from Chain Restaurants in the U.S., *American Journal of Preventative Medicine* 2006 vol. 30 at 266-268.

⁷⁹ See http://media.corporate-ir.net/media_files/irol/87/87140/2007_AR.pdf.

1 translates to approximately 0.039% of meals (or one in 2,500) served for which nutritional
2 information might have been obtained electronically.

3 **B. Few Consumers See The On-Site Information Currently Available At Some**
4 **Chain Restaurants**

5 50. The methods for providing onsite nutrition information described in the declarations of
6 DeMuth (McDonald's) and Quirantes (Burger King Corporation) – methods that they claim to be
7 more comprehensive than the requirements of San Francisco's Menu Labeling Ordinance – are also
8 not effective in transmitting nutrition information to consumers.

9 51. The New York City Department of Health and Mental Hygiene conducted a large exit
10 interview survey of 7,318 diners at a random sample of 275 of restaurants in May and June of 2007.
11 With the exception of Subway, only 4% of chain restaurant consumers reported seeing calorie
12 information.⁸⁰

13 52. Only at Subway, which posted some nutritional information near cash registers at the
14 time of New York's survey, did a substantial proportion – 31% – of consumers report seeing calorie
15 information.⁸¹ When chain restaurants post calories even more prominently, as required by San
16 Francisco's Menu Labeling Ordinance, consumers will be even more likely to see the nutritional
17 information and make healthier choices.

18 53. Provision of nutrition information in restaurants can have an impact even if not all
19 patrons make use of the information. The DeMuth declaration (McDonald's) cites Krukowski's
20 report⁸² that about 50% of students in a study said that they were not likely to use caloric information.
21 Yet, conversely about 50% of patrons in that same study stated that they *would* use nutrition
22 information if it were available, suggesting that calorie posting will have a substantial effect on public
23 health. National estimates suggest that affecting energy balance by even 100 calories per day could

24 ⁸⁰ Bassett M *et al.*, Purchasing Behavior and Calorie Information at Fast-Food Chains in New
25 York City, 2007. *American Journal of Public Health*. (Jun 12, 2008).

26 ⁸¹ *Id.*

27 ⁸² Krukowski RA, Harvey-Berino J, Kolodinsky J, Narsana RT, Desisto TP. Consumers may
28 not use or understand calorie labeling in restaurants. *Journal of the American Dietetic Association*
2006; 106(6):917-20.

1 alter the trajectory of the average weight gain that is driving the obesity epidemic.⁸³ Even the
 2 National Restaurant Association accepts this, stating, "Research shows that affecting energy balance
 3 by 100 calories per day could prevent weight gain in most of the population."⁸⁴

4 54. The key difference between restaurants' current voluntary practices and the disclosures
 5 required by Ordinance 40-08 is that nutrition information will be seen by most consumers under
 6 Ordinance 40-08, while it is seen by 4% of consumers (excluding Subway) using present methods.
 7 Unlike disclosures on food wrappers or tray liners, the disclosures mandated by Ordinance 40-08 will
 8 be seen at the point of sale, *before* consumers select their order. As the FDA-commissioned
 9 Keystone Report concluded, "information provided at the consumer's point of decision, wherever that
 10 might be, is most likely to be used and useful to the consumer."⁸⁵ The FDA Obesity Working
 11 Group's 2004 report similarly recommended that restaurants provide "readily available, nutrient
 12 content information *at the point-of-sale*."⁸⁶

13 55. Despite the initiatives described in the DeMuth (McDonald's) and Quirantes (Burger
 14 King) Declarations, nutrition information is invisible to the overwhelming majority of consumers
 15 who stand on line each day and order items from its menu boards. As described in the declarations
 16 submitted by CRA, chain restaurants do not typically display nutritional information where and when
 17 consumers make their choices and purchases. Such information is typically displayed only where it is
 18 hard to find, difficult to read, or accessible only after a purchase is made. Thus, the provided
 19 information has little or no impact on choice.

23 ⁸³ Hill JO, Wyatt HR, Reed GW, Peters JC. Obesity and the environment: where do we go
 24 from here? *Science* 2003; 299(5608):853-5.

25 ⁸⁴ Garren DM, Gay J. Comment; Notice of Intention to Repeal and Reenact 81.50 to Article
 26 81 of the New York City Health Code; Mandatory Calorie Statements. National Restaurant
 Association. November 27, 2007 p.13.

27 ⁸⁵ Keystone Report (Pl. Appendix F), at 81.

28 ⁸⁶ *FDA Calories Count Report*, at Part V(B) (emphasis added).

**SCIENTIFIC EXPERTS RECOMMEND THAT NUTRITIONAL INFORMATION BE
READILY AVAILABLE IN RESTAURANTS, ESPECIALLY AT THE POINT OF
PURCHASE**

56. Although McDonald's claims that there is no "public health community consensus on menu board labeling," *see* DeMuth Dec. ¶ 12, nutritional labeling of restaurant foods has been recommended as a useful strategy for addressing obesity and its related illnesses by the:

- FDA
- U.S. Surgeon General
- National Academies' Institute of Medicine
- American Medical Association
- American Diabetes Association
- American Heart Association
- American Cancer Society
- American Academy of Pediatrics
- Center for Science in the Public Interest, and
- American Public Health Association.⁸⁷

The FDA's Working Group on Obesity has concluded that "the pervasiveness of the obesity epidemic means that more nutrition information *must* be presented to consumers in restaurant settings."⁸⁸ Similarly, the U.S. Surgeon General has called for "increasing availability of nutrition information for

⁸⁷ *See FDA Calories Count Report*, at Part V(B) (emphasis added); U.S. DEP'T OF HEALTH & HUMAN SERVS., THE SURGEON GENERAL'S CALL TO ACTION TO PREVENT AND DECREASE OVERWEIGHT AND OBESITY (2001), *available at* <http://www.surgeongeneral.gov/topics/obesity/calltoaction/CalltoAction.pdf>; INSTITUTE OF MEDICINE, PREVENTING CHILDHOOD OBESITY: HEALTH IN THE BALANCE (Jeffrey P. Coplan et al. eds., 2004) (emphasis added); AM. MED. ASS'N, Press Release, AMA Adopts Policies to Promote Healthier Food Options to Fight Obesity in America (June 27, 2007), *available at* <http://www.ama-assn.org/ama/pub/category/17768.html>; AM. HEART ASS'N, Position Statement on Menu Labeling (March 4, 2008), *available at* <http://www.americanheart.org/downloadable/heart/1204661406112Policy%20Position%20Statement%20on%20Menu%20Labeling.pdf>; AM. PUBLIC HEALTH ASS'N, Support for Nutrition Labeling in Fast-Food and Other Chain Restaurants (Nov. 9, 2004), *available at* <http://www.apha.org/advocacy/policy/policysearch/default.htm?id=1300>; <http://www.nyc.gov/html/doh/downloads/pdf/public/notice-intention-hc-art81-50-1007.pdf>.

⁸⁸ *See FDA Calories Count Report*, Section V(B)(2) (emphasis added).

1 foods eaten and prepared away from home."⁸⁹ The National Academies' Institute of Medicine has
 2 recommended that: "Fast-food and full-service restaurants should expand healthier meal, food, and
 3 beverage food options (including children's meals) and provide calorie content and general nutrition
 4 information *at point of purchase*."⁹⁰ In a 2004 report, the Institute concluded that because "[t]he
 5 obesity epidemic is a serious public health problem that calls for *immediate* action to reduce its
 6 prevalence as well as its health and social consequences ... actions should be based on the best
 7 available evidence—as opposed to waiting for the best possible evidence."⁹¹ The 2006-2007 report of
 8 the President's Cancer Panel also recommends: "Make nutrition information on restaurant foods
 9 readily available on menus and understandable to consumers."⁹²

10 57. The final report of the FDA's Keystone report recommends that: "Away-from-home
 11 food establishments should provide consumers with calorie information in a standard format that is
 12 easy to use."⁹³ This was the *first* recommendation in Chapter 4 of the report. As the report noted
 13 when providing operational tips for accomplishing its recommendation:

14 Information should be provided in a manner that is easy for consumers to see and use as part
 15 of their purchasing and eating decisions. Consumer might view such information, for
 16 example, when standing at a counter, while reviewing a menu board, in a car when reading a
 17 drive-through menu, or when sitting down at a table reviewing a menu, a table tent, or others
 18 means of providing information.⁹⁴

19 CRA's Memorandum of Points and Authorities cites other parts of the report, such as the desirability
 20 of further research, but not this key recommendation.

21 ⁸⁹ U.S. DEP'T OF HEALTH & HUMAN SERVS., THE SURGEON GENERAL'S CALL TO ACTION TO
 22 PREVENT AND DECREASE OVERWEIGHT AND OBESITY (2001), *available at*
 23 <http://www.surgeongeneral.gov/topics/obesity/calltoaction/CalltoAction.pdf>.

24 ⁹⁰ Institute of Medicine of the National Academies. Industry can play a role in preventing
 25 childhood obesity. Fact Sheet 2004. Drawn from Preventing Childhood Obesity, Health in the
 26 Balance 2005, *available at* www.iom.edu.

27 ⁹¹ *Id.* (emphasis added).

28 ⁹² President's Cancer Panel. Promoting Healthy Lifestyles. Policy, Program and Personal and
 Recommendations for Reducing Cancer Risk. 2006-2007 Annual Report. U. S. Department of Health,
 National Institutes of Health, National Cancer Institute. Bethesda, Maryland, 2007.

⁹³ Keystone Report (Pl. Appendix F), at 76.

⁹⁴ *Id.* at 77-78.

58. In concluding that the best available scientific evidence supports the provision of nutrition information at the point of purchase, San Francisco is part of a growing national consensus that menu labeling legislation is likely to yield significant health and economic benefits by providing consumers with the information they need to make better informed choices and decrease their risk for obesity.

CHAIN RESTAURANTS ARE AN APPROPRIATE FOCUS FOR NUTRITION DISCLOSURE REQUIREMENTS

59. Chain restaurants represent an appropriate focus for regulation for several reasons. As outlined above, the vast majority of chain restaurants typically serve food that is clearly associated with excess caloric intake and with obesity. In addition, children, an especially vulnerable segment of the population, are targeted by chain restaurant marketing campaigns.

A. Chain Restaurants Often Serve Standardized Meals That Are High In Calories And Low In Nutritional Value

60. As explained above in paragraphs 29-35, fast food and chain restaurants often serve highly caloric meals and eating such meals is associated with being overweight or obese. Chain restaurants also typically have standardized menus, recipes and preparation methods that allow for accurate nutritional disclosures.

B. Chain Restaurants Often Target Children In Their Advertisements

61. Many of the chain restaurants covered by Ordinance 40-08 make extensive use of advertising to promote the appeal and wholesome image of their products, particularly to susceptible groups such as children. The major chains use marketing strategies directly aimed at children to establish a preference for their fast food brand,⁹⁵ and children who view such television advertisements are about 50% more likely to eat fast food.⁹⁶ Such advertising does not contain any

⁹⁵ Connor, SM. Food-related advertising on preschool television: building brand recognition in young viewers. *Pediatrics*. 118(4):1478-85, 2006

⁹⁶ Taveras EM, Sandora TJ, Shih, M-C, Ross-Degnan D, Goldmann DA, Gillman M W. The association of television and video viewing with fast food intake by preschool-age children. *Obesity*. 14(11):2034-41, 2006 Nov.

information about the risk of obesity for those consuming fast food regularly, and many such advertisements may inaccurately imply that fast food is generally wholesome, healthy food. Ads typically feature slender, healthy-looking children and parents. For instance, the ad below from McDonald's suggests that McDonald's is good place to obtain a meal for a child, a place where parents "don't have to worry about the quality or nutrition."



62. This ad deceptively suggests that parents do not have to worry about their children's nutrition at McDonald's. Based on the options listed on McDonald's website, however, the average number of calories in McDonald's Happy Meal offerings is approximately 530 calories, 26% higher than the advertised meal.⁹⁷ The average caloric content of a Happy Meal is over half of a 3-year-old's daily-recommended number of calories and about 40% of the recommended daily caloric intake for a child between four and eight years old.⁹⁸ Indeed, over 20% of the Happy Meals listed on McDonald's

⁹⁷ http://www.mcdonalds.com/app_controller.nutrition.categories.happymeals.index.html

⁹⁸ American Heart Association, *Table: Dietary Recommendations for Children*, available at <http://www.americanheart.org/presenter.jhtml?identifier=3033999>.

1 child between four and eight years old.⁹⁸ Indeed, over 20% of the Happy Meals listed on McDonald's
 2 website have over 600 calories, nearly half of the average recommended number of calories for 4 to 8
 3 year olds. Such calorie dense meals contrast sharply with McDonald's advertising which promises to
 4 provide "[a]ge appropriate portion sizes for our kids meals."⁹⁹

5 63. Researchers at Robert Wood Johnson Foundation's national research program
 6 *Bridging the Gap* found that fast-food advertisements make up the largest category of all food related
 7 advertisements seen by teens.¹⁰⁰ "Clearly our kids are getting bombarded with poor nutritional
 8 messages every day," said Risa Lavizzo-Mourey, M.D., M.B.A., president and CEO of the Robert
 9 Wood Johnson Foundation.¹⁰¹ An National Institutes of Health-supported study looked at television
 10 fast-food advertising seen by children and estimated that these advertisements were responsible for
 11 18% of overweight in children ages 3-11 and 14% in adolescents.¹⁰² Given the epidemic of
 12 childhood obesity, Ordinance 40-08 is an important tool to help parents offset the effects of fast-food
 13 advertising on their children.

14 **ORDINANCE 40-08 REQUIRES NUTRITION DISCLOSURES – IT DOES NOT FORCE A**
 15 **MESSAGE**

16 64. CRA argues that Ordinance 40-08 forces restaurants to voice the City's points of view
 17 that "patrons *must* consider the caloric content of food when ordering in a restaurant," and "calories
 18 are the only nutritional criterion that patrons need to consider." Pl. Mem. at 23-24. Posting calorie
 19 information on menu boards will not force anyone to take calories into consideration, any more than

20 ⁹⁸ American Heart Association, *Table: Dietary Recommendations for Children*, available at
<http://www.americanheart.org/presenter.jhtml?identifier=3033999>.

21 ⁹⁹ McDonald's, *Fact Sheet: Communicating with Children*, available at
[http://www.mcdonalds.com/corp/about/factsheets.RowPar.0001.ContentPar.0001.ColumnPar.0005.Fi](http://www.mcdonalds.com/corp/about/factsheets.RowPar.0001.ContentPar.0001.ColumnPar.0005.File1.tmp/Communicating%20to%20Children%20FACT%20SHEET.pdf)
 22 [le1.tmp/Communicating%20to%20Children%20FACT%20SHEET.pdf](http://www.mcdonalds.com/corp/about/factsheets.RowPar.0001.ContentPar.0001.ColumnPar.0005.File1.tmp/Communicating%20to%20Children%20FACT%20SHEET.pdf).

23 ¹⁰⁰ Powell, LM, Szczypka G, Chaloupka, FJ, Braunschweig CL. Nutritional content of
 24 television food advertisements seen by children and adolescents in the United States. *Pediatrics*
 120:576-583, 2007.

25 ¹⁰¹ Robert Wood Johnson Foundation. New Study Confirms Vast Majority of Ads Seen by
 Kids Promote Foods High in Sugar, Fat or Sodium. Sep 4, 2007 - Chicago, Ill. Accessed February 6,
 2008 at <http://www.rwjf.org/newsroom/newsreleasesdetail.jsp?productid=21922>

26 ¹⁰² Chou SY, Rashad I, Grossman M. Fast Food Advertising on television and its influence on
 27 childhood obesity. R01 DK54826 from the National Institute of Diabetes and Digestive and Kidney
 Diseases Report. December 2006.

1 having labels on clothing (which are mandatory) forces you to consider buying cotton rather than
 2 polyester, or access to the Nutrition Facts Panel forces you to consider buying tofu. The Ordinance
 3 simply requires that consumers have ready access to calorie information when making a choice. It
 4 does not in any way imply that calories are the only important nutritional criterion, especially since it
 5 requires that the amount of saturated fat, carbohydrates and sodium also be provided on menus for
 6 each menu item. It simply establishes a minimum requirement for disclosure of the information of
 7 the greatest public health importance in fighting the obesity epidemic.

8 **THE REQUIREMENTS OF ORDINANCE 40-08 ARE NARROWLY TAILORED AND ARE**
 9 **NECESSARY TO EFFECTIVELY COMMUNICATE WITH CONSUMERS**

10 65. In contrast to the virtual invisibility of nutritional information in many chain
 11 restaurants, menus and menu boards are effective means of providing information. Indeed, the
 12 evidence submitted by CRA describes how effectively menu boards can communicate information to
 13 their patrons. As Michael Andres of McDonald's explained in his declaration, "[o]ur menu boards are
 14 the focal point of our business inside our restaurants." Andres Dec. ¶ 2. Given the importance of
 15 menus and menu boards for communicating with customers, nutritional disclosures on menus and
 16 menu boards is essential to inform consumers about the nutritional content of foods and overcome the
 17 failure of current practices that transmit nutritional information to no more than a small fraction of
 18 customers.

19 **NATURAL INGREDIENTS, FRESH FOODS AND CALORIE POSTING ARE**
 20 **COMPATIBLE**

21 66. Contrary to assertions of the CRA, there is nothing incompatible about cooks using
 22 fresh, non-processed foods and San Francisco's Menu Labeling Ordinance. Mr. Randolph, from
 23 T.G.I. Friday's, states that their food is often cut, measured, and prepared by hand by individual
 24 cooks in its restaurants, introducing some variation. He also notes that there are some natural
 25 differences in the size and nutritional content of meats and other ingredients in T.G.I. Friday's meals.
 26 To address Mr. Randolph's concerns about inconsistency in natural ingredients, Ordinance 40-08
 27 provides that restaurants are only in violation of the Ordinance if they do not make disclosures in the
 28 form and location required by the Ordinance, the nutritional information disclosed is different from
 what the restaurant knows or believes to be the true and accurate information, or the nutritional

information "[d]eviates from what actual analysis or other reliable evidence shows to be the average content of a representative sample of the Menu Item by more than 20%." S.F. Health Code § 468.3(g)(2). Mr. Randolph does not explain why this 20% safe-harbor is insufficient to account for the natural variations in food and preparation methods. Chain restaurants employ processes and follow specifications to ensure consistency in the preparation of their menu items. As Mr. Randolph explains, T.G.I. Friday's chefs "follow specifications on how to prepare dishes, and they and other employees receive training on how to prepare and present our menu items." Randolph Dec. ¶ 8. Indeed, T.G.I. Friday's and most chain restaurants are already providing nutritional information on menus in New York even though that ordinance does not contain a 20% safe harbor provision. Thus, there can be no doubt that is feasible for T.G.I. Friday's and other chain restaurants to provide nutritional information on their menus.

STANDARD OF EVIDENCE FOR PUBLIC HEALTH DETERMINATIONS

67. The Allison declaration raises the question of what should be the standard of evidence for promulgating public policy. The standard for recommending certain biomedical interventions is generally the evidence of benefit from randomized, placebo-controlled clinical trials. The grading system which Allison cites is based on an "A" rating for strong evidence from randomized controlled trials in such settings. While such trials represent one of the strongest forms of scientific evidence, they are rarely available, or even feasible, for public policy interventions. For example, could we realistically or ethically randomize people and expose some to sunburn for decades to observe their skin cancer rates?

68. Had evidence from randomized controlled trials been the requirement for implementation of public health policies, we would have failed to implement many of the major public health triumphs on the past hundred years, including:

- Chlorination of water
- Fluoridation of water
- Elimination of lead-based paint
- Mandatory installation of automobile safety seat belts

- Smoke detectors
- Smoke-free air policies
- Standards to reduce hazardous conditions in the workplace

69. Adherence to a rigid standard of randomized controlled trials for social policy making would have cost millions of lives lost to diseases, motor vehicle accidents, fires, and cancer as well as resulting in millions more lead-poisoned and intellectually impaired children. Government has the obligation to create public policy wisely, based on the best available evidence, to protect the public's health, and cannot wait to act until all scientific questions are answered, especially when policies that protect the public's health are likely to carry no or minimal risks. As the FDA-sponsored Keystone Report:

The need for additional research should not preclude reasonable action. As noted in the Institute of Medicine's 2004 report, Preventing Childhood Obesity: Health in the Balance "[t]he obesity epidemic is a serious public health problem that calls for immediate action to reduce its prevalence as well as its health and social consequences. Therefore...actions should be based on the best available evidence—as opposed to waiting for the best possible evidence." With regard to this last consideration, the best available evidence for obesity prevention and control is grounded in a solid, well-documented knowledge base regarding energy balance. Keystone Forum participants believe that what is needed now is reasonable guidance and action to help make healthy food choices easier for individuals and families.¹⁰³

70. The Allison declaration also references Seymour et al, 2004.¹⁰⁴ Seymour makes clear that not only randomized clinical trials, but a variety of forms of evaluation of effectiveness of nutrition policies are relevant, many of which can only be performed post-implementation: "... policy interventions can be more difficult to evaluate than environmental interventions which may account for the lack of such studies in the literature ... The impact of this policy change may not come only from individual awareness, knowledge and behavior change but may also come from

¹⁰³ Keystone Report (Pl. Appendix F), at 20.

¹⁰⁴ Seymour JD, Yaroch AL, Serdula M, Blanck HM, Khan LK. Impact of nutrition environmental interventions on point-of-purchase behavior in public: a review. *Preventative Medicine* 2004; 39: S108-S136

1 changes to the foods served by the restaurant so the nutritional content of menu items pre- and post-
 2 intervention should be compared."

3 **ORDINANCE 40-08 IS AN IMPORTANT PART OF SAN FRANCISCO'S BROADER**
 4 **EFFORT TO REDUCE OVERWEIGHT AND OBESITY**

5 71. The Department does not propose that nutrition labeling *alone* can reverse the obesity
 6 epidemic. Rather, the Menu Labeling Ordinance is one of a series of policy efforts being pursued in
 7 San Francisco to improve education and empower consumers to make healthier choices. For
 8 instance, San Francisco's Mayor has instituted a program called "Shape Up San Francisco" to
 9 "increase the awareness of and opportunities for increased physical activity and improved nutrition
 10 where people live, play, work and learn." Specifically, Shape Up San Francisco seeks to:

- 11 • Increase access to affordable, healthy food in neighborhoods with limited access.
- 12 • Complete the streets for improved walking and biking.
- 13 • Promote overall community aesthetics and atmosphere of safety to encourage outdoor
 14 physical activity and recreation.
- 15 • Create a Physical Activity Council to coordinate physical activity services and policy work.
- 16 • Adopt and implement health and wellness worksite criteria/standards.
- 17 • Adopt standards for the provision of healthy, sustainable food at all meetings and events.
- 18 • Develop and adopt legislation requiring city funded youth programs to adhere to nutrition
 19 standards.
- 20 • Create, adopt and implement policies to address physical activity in after school sites.
- 21 • Work with San Francisco healthcare facilities to create and implement health and wellness
 22 policies to improve healthy eating and physical activity environments for staff, patients,
 23 clients, and visitors.
- 24 • Increase reimbursement for obesity prevention and treatment by insurers.¹⁰⁵

25
 26
 27 ¹⁰⁵ See Shape Up San Francisco: About Us, *available at*
 28 http://www.sfgov.org/site/shapeupsf_index.asp?id=58059.

72. Thus, the Department and the City are undertaking a broad range of measures to help residents of San Francisco prevent or reverse weight gain. The need for additional actions to halt the obesity epidemic is no reason to refrain from taking action on posting nutrition information.

ORDINANCE 40-08 IS NECESSARY TO AVOID CONSUMER CONFUSION OR DECEPTION

73. Ordinance 40-08 is necessary to prevent consumer confusion or deception concerning the nutritional content of the food they order at chain restaurants.

74. The different calorie counts for different menu items are not intuitively obvious to the average consumer. Indeed, consumers are often shocked to discover the calorie content in foods they thought were lower in calories. For instance, few people would guess that the pecan-crusted chicken salad at T.G.I. Friday's (1,360 calories) has more calories than the cheeseburger and fries (1,290 calories).¹⁰⁶ Or that a smoked turkey sandwich (930 calories) at Chili's has more calories than a sirloin steak (540 calories). Or that a large milk shake from McDonald's has over 1,000 calories, about half the total daily-recommended amount of calories.

75. Another source of consumer confusion or deception is that the calorie increase that comes with ordering a larger size of an item is often not reflected in the price differentials. For example, going from a McDonald's \$1.79 medium fries with 380 calories to a \$1.99 large fries with 570 calories is an 11% price increase but a 50% calorie increase. Calorie information will be particularly important to highlight these increases.

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¹⁰⁶ Roni Caryn Rabin, *New Yorkers Try To Swallow Calorie Sticker Shock*, MSNBC.COM (July 17, 2008), <http://www.msnbc.msn.com/id/25464987>.

76. Even when chain restaurants make nutritional information available, it is often confusing or deceptive. For instance, an "individual-sized" Chicago Classic pizza from Uno Chicago Grill ("Uno") has 115% of a person's daily-recommended intake of calories, nearly 250% of a person's daily fat allowance, and 186% of a person's daily sodium allowance.¹⁰⁷ Even though Uno's menu confirms that the "individual" pizza is meant to serve only one person,¹⁰⁸ in order to avoid having to disclose these shocking facts, Uno's website provides nutrition information for the "individual" pizza by "serving size," and the "individual" size pizza contains three servings for purposes of its nutritional disclosures.¹⁰⁹ Because Uno's website lists the caloric, fat and sodium content as only 1/3rd of the actual totals, a customer who checks the nutritional disclosures is likely to believe that the individual pizza has only 1/3rd of the calories, fat and sodium that it actually has, unless that customer happens to notice the deceptive serving size definition.

I declare under penalty of perjury pursuant to 28 U.S.C. § 1746 that the foregoing is true and correct to the best of my knowledge.

Executed on July 31, 2008

By: 
MITCHELL H. KATZ, M.D.

¹⁰⁷ Nutrition Information for Chicago Classic Pizza, <http://www.unos.com/kiosk/nutritionUnos.html>.

¹⁰⁸ Menu from Uno Chicago Grill, http://641.unotogo.com/zgrid/proc/site/sitemnup.jsp?nls_sf=tm5216&nls_st=tm1270421&id=4103317810560&ctx=ct156772812&mnuid_it=61684&vnmi_it=174.

¹⁰⁹ Nutrition Information for Chicago Classic Pizza, <http://www.unos.com/kiosk/nutritionUnos.html>.

EXHIBIT A

Mitchell H. Katz, MD

Department of Public Health
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San Francisco, CA 94102
Mitch.Katz@sfdph.org
(415) 554-2999

I. CURRENT POSITION

1997 - present Director of Health (First six months as Interim)
Health Officer
Department of Public Health
City and County of San Francisco

Budget: \$1.5 billion; number of employees: approx. 8000; two hospitals (SF General Hospital and Laguna Honda Hospital), 9 primary care health centers, county managed care mental health system, substance abuse system, jail health system, environmental health, AIDS services, community health promotion and prevention, maternal-child health, communicable disease prevention, tuberculosis and sexually transmitted disease control, public health laboratory, emergency medical services agency.

II. EDUCATION

1981 B.A. Yale University, *magna cum laude*.
1986 M.D. Harvard Medical School
1986 - 89 Residency, Primary Care Internal Medicine
University of California, San Francisco
1989 - 91 Clinical Scholar, Robert Wood Johnson Foundation
University of California, San Francisco

III. LICENSES, CERTIFICATIONS

1987 Medical license, California (# G061707)
1989 Certification, American Board of Internal Medicine
2005 Certification, American Academy of HIV Medicine

IV. POSITIONS HELD

A. Administrative Positions

1996 - 97 Director, Community Health & Safety
San Francisco Department of Public Health
1995 - 96 Interim Medical Director, Emergency Medical Services
San Francisco Department of Public Health
1994 - 96 Director, Epidemiology, Disease Control, & AIDS
San Francisco Department of Public Health
1992 - 97 Director, AIDS Office
San Francisco Department of Public Health

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1991 - 92 Chief, Research Branch, AIDS Office (Department of Public Health, City and County of San Francisco)

B. Academic Positions

2002 - present Clinical Professor of Medicine, UCSF

2002 - present Clinical Professor of Epidemiology and Biostatistics, UCSF

1998 - 02 Associate Clinical Professor of Medicine, UCSF

1998 - 02 Associate Clinical Professor of Epidemiology and Biostatistics, UCSF

1992 - 98 Assistant Clinical Professor of Epidemiology and Biostatistics, UCSF

1991 - 98 Assistant Clinical Professor of Medicine, UCSF

1989 - 91 Clinical Instructor of Medicine, UCSF

C. Research Positions/Grants

2000 - 02 Co-Investigator, Behavioral, Basic, and Clinical Studies of PEP (National Institute of Health).

1997 - 99 Principal Investigator, Using new technologies to identify persons at highest risk for HIV (Henry J. Kaiser Family Foundation).

1997 - 00 Co-Principal Investigator, Postexposure Prophylaxis for sexual and injection drug exposures (National Institute of Health).

1996 - 99 Principal Investigator, Effectiveness of Referrals from HIV Test Sites (California Universitywide AIDS Research Program).

1994 - 00 Co-investigator, HIV Cost and Services Utilization Study, RAND Corporation (Agency for Health Care Policy & Research).

1991 - 95 Co-investigator, Epidemiology Project, Oral Manifestations of AIDS, UCSF (National Institute of Dental Research).

1991 - 93 Principal Investigator, San Francisco City Clinic Cohort Study (Centers for Disease Control).

1990 - 91 Principal Investigator, Epidemiology Project, Oral Manifestations of AIDS, UCSF (National Institute of Dental Research).

1990 - 91 Principal Investigator, Secondary Prevention for HIV-infected Persons (UCSF AIDS Clinical Research Center).

D. Clinical Positions

1998 - present Attending Physician, Inpatient Medical Service, San Francisco General Hospital

1995 - present Attending Physician, Ward 86 Outpatient AIDS Clinic, San Francisco General Hospital

1989 - 96 Attending Physician, General Medical Clinic, UCSF

1989 - 94 Attending Physician, AIDS Clinic, UCSF

E. Ancillary Positions

2005- present Commission, Health Services Board, CCSF (Provides health, dental, and vision benefits to 106,000 City employees and dependents)

1998 - present President, Board of Directors, San Francisco Health Authority (Quasi-governmental organization providing managed care health benefits to 55,000 persons)

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1997 - present Board of Directors, San Francisco Health Authority
 1997 - present Consultant, Board of Directors, San Francisco Medical Society
 1999 - 01 Board of Directors, California Conference of Local Health Officers
 1999 - 01 Alternate, California Medical Association House of Delegates
 1999 - 00 Board of Directors, Health Officers Association of California
 1997, 2000 Consultant, Centers for Disease Control and Prevention, Postexposure Prophylaxis of Sexual and Drug Exposures
 1997 Consultant, Centers for Disease Control and Prevention, Future Direction of HIV Surveillance
 1994 Consultant, AIDS Prevention: Building Japan/US Cooperation and Exchange, Center for AIDS Prevention Studies, San Francisco
 1993 Consultant, Centers for Disease Control and Prevention, HIV Prevention Community Planning
 1993 Member, Advisory Committee, AIDS Drug Program, Office of AIDS, State of California
 1993 Member, AIDS Advisory Council, Senator Diane Feinstein
 1992 Track Co-chair, Policy and Administration, Fifth National AIDS Update Conference, San Francisco
 1991 Co-chair, Access and Quality of Ambulatory HIV Care Symposium, Center for AIDS Research, San Francisco
 1990 - 91 Program Coordinator, Dental Epidemiology Fellowship, UCSF

V. AWARDS

2003 Award of Achievement, San Francisco Suicide Prevention
 2002 Outstanding Community Service Award, American College of Physicians, Northern California Chapter
 2002 James R. Harrison Award, San Francisco AIDS Foundation
 2001 Agent of Social Change Award, The Institute for Community Health Outreach
 2000 Public Health Hero, University of California, Berkeley (Organization award to the San Francisco Department of Public Health for its AIDS work)
 2000 Honorable Mention, Physician Category, American Medical Writers Association (for: Multivariable Analysis: A Practical Guide for Clinicians)
 2000 Pax et Bonum Award, Dignity San Francisco
 1995 Public Managerial Excellence Award, Mayor's Fiscal Advisory Committee
 1986 Henry C. Cabot Prize, Harvard Medical School
 1985 - 86 Charles A. Dana Foundation Fellowship in Clinical Epidemiology

VI. PROFESSIONAL ACTIVITY

A. Memberships to Professional Organizations:

San Francisco Medical Society
 California Medical Association

Mitchell Katz, MD

4

Community Consortium of Physicians, San Francisco

B. Service to Professional Organizations

Invited Manuscript Reviewer

*AIDS**American Journal of Public Health**Annals of Internal Medicine**Clinical Infectious Diseases**Journal of Acquired Immune Deficiency Syndrome**Journal of Clinical Epidemiology**Journal of General Internal Medicine**Journal of Health Care for the Poor and Underserved**Journal of Infectious Diseases**Journal of Women's Health**Medical Care**Medical Decision Making**New England Journal of Medicine**Western Journal of Medicine*

Invited Grant Reviewer

*Agency for Health Care Policy & Research***VII. SERVICE TO THE UNIVERSITY OF CALIFORNIA****A. Teaching**

1998 - Inpatient Attending, Medical Service, SFGH

1997 Preceptor, Community Provider AIDS Training Project

1994 - Instructor, Research Methods for Clinical Fellows

1995 - 00 Preceptor, Outpatient HIV AIDS Clinic (Ward 86), San Francisco General Hospital/UCSF

1994, 1997 Preceptor, Preventive Medicine Residency Program, UCB/UCSF

1992 - 96 Mentor, Primary Care Residency Program, UCSF

1992 - 94 Instructor, Designing Clinical Research, UCSF

1992 - 93 Attending, Fellows' Seminar, Center for AIDS Prevention, UCSF

1991 - 96 Mentor, Robert Wood Johnson Clinical Scholars Program, UCSF

VIII. PUBLICATIONS**A. Original Articles in Peer Reviewed Journals****Katz MH.** Interventions to increase interventions are needed. *J Public Health Manag Pract.* 2008;14:224-7.Clements-Nolle K, Marx R, Pendo M, Loughran E, Estes M, **Katz M.** Highly active antiretroviral therapy use and HIV transmission risk behaviors among individuals who are HIV infected and were recently released from jail. *Am J Public Health.* 2008;98:661-666.**Katz MH.** Golden Gate to health care for all? San Francisco's new universal-access program. *N Engl J Med.* 2008;358:327-329.

Schwarcz S, Scheer S, McFarland W, **Katz M**, Valleroy L, Chen S, Catania J. Prevalence of HIV infection and predictors of high-transmission sexual risk behaviors among men who have sex with men. *Am J Public Health*. 2007;97:1067-1075.

Zetola NM, Klausner JD, Haller B, Nassos P, **Katz MH**. Association between rates of HIV testing and elimination of written consents in San Francisco. *Research Letter. JAMA*. 2007;297:1061-2.

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EXHIBIT B



May 2008

Menu Labeling as a Potential Strategy for Combating the Obesity Epidemic

A Health Impact Assessment

Paul Simon, Christopher J. Jarosz, Tony Kuo, and Jonathan E. Fielding

Executive Summary

Mandated posting of calorie information on menus and menu boards at fast food and other large chain restaurants has garnered growing public and legislative support as a potential strategy for addressing the obesity epidemic. However, no studies to our knowledge have sought to quantify the potential impact of this strategy on the epidemic. To address this gap, we conducted a health impact assessment of menu labeling, as proposed in California's Senate Bill 120 in 2007 and in the current Senate Bill 1420, on the obesity epidemic in Los Angeles County.

Data on population weight gain from the California Department of Education Physical Fitness Testing Program and the Los Angeles County Health Survey were used to quantify the obesity epidemic in Los Angeles County. Additional data to estimate the number of meals served annually at large chain restaurants in the county, the percentage of restaurant patrons that would order reduced calorie meals as a result of menu labeling, and the amount of calorie reductions that would result from patron response to calorie postings were examined using published and unpublished data sources. Multiple scenarios of restaurant patron response to calorie postings were examined to estimate a plausible range of impacts of menu labeling on the obesity epidemic.

Using conservative assumptions that calorie postings would result in 10% of large chain restaurant patrons ordering reduced calorie meals, with an average reduction of 100 calories per meal, and no compensatory increase in other food consumption, menu labeling would avert 38.9% of the 6.75 million pound average annual weight gain in the county population aged 5 years and older. Substantially larger impacts would be realized if higher percentages of restaurant patrons ordered reduced calorie meals or average per meal calorie reductions increased. These findings suggest that mandated menu labeling at fast food and other large chain restaurants could have a sizable salutary impact on the obesity epidemic, even with only modest changes in consumer behavior.

What is a Health Impact Assessment?

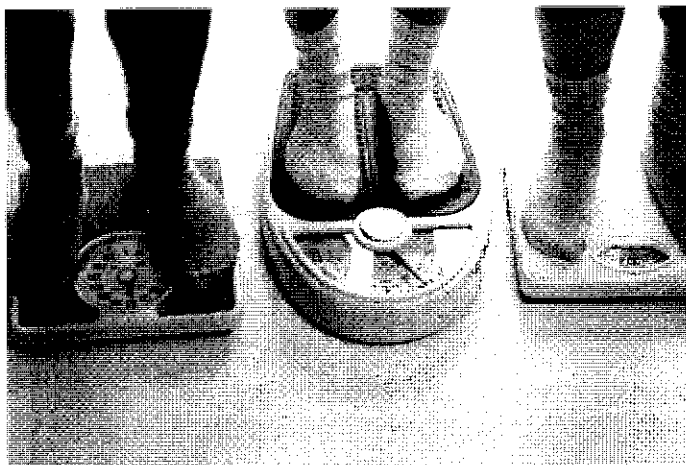
A health impact assessment is a combination of procedures, methods, and tools by which a policy, program, or project may be judged in terms of its potential effects on the health of a population, and the distribution of those effects within the population.[†]

[†] Health Impact Assessment: Main Concepts and Suggested Approach. Brussels, Belgium: European Centre for Health Policy, World Health Organization Regional Office for Europe; 1999. Gothenburg Consensus Paper.

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Introduction

The obesity epidemic constitutes one of the most significant public health threats facing Los Angeles County and the nation. Adults who are obese are at increased risk for a variety of chronic health conditions, including type 2 diabetes, hypertension, heart disease, stroke, arthritis, fatty liver disease, gallbladder disease, sleep apnea, and some forms of cancer (e.g., breast, uterine, and colon).



Children who are obese have a much greater likelihood of being obese as adults. Obesity during childhood may lead to more immediate adverse health effects, including hypertension, high blood cholesterol levels, type 2 diabetes, insulin resistance (a precursor of type 2 diabetes), orthopedic problems, liver damage, sleep apnea, and asthma. Children who are obese are also more likely than their non-obese counterparts to be the target of stigmatization and discrimination, and to suffer from low self-esteem and depression.

The obesity epidemic also exerts an enormous economic burden. Between 1987 and 2001, the rising obesity rate and related medical conditions accounted for more than one-quarter of the growth in health care spending in the United States.¹ In addition, lost productivity costs attributable to obesity have been estimated to be even greater than health care costs.² Together, these costs are likely to rise at an escalating rate over the next generation as the swelling ranks of obese children reach adulthood and begin developing obesity-related diseases at progressively younger ages.

While the underlying cause of the obesity epidemic appears to be straightforward — a chronic excess of

calories consumed versus calories burned among a large percentage of the population — identifying effective strategies and interventions to address the epidemic has been frustratingly difficult. This difficulty reflects to a large degree the complex array of individual, family, community, and societal factors that powerfully influence people's dietary practices and levels of physical activity. Given this complexity, it is clear that success in reversing the epidemic will require a broad range of interventions operating at multiple levels and involving multiple segments of society.

One area of recent interest as a potential strategy to reduce the obesity epidemic is the provision of calorie information on restaurant menus and menu boards at fast food and full-service chain restaurants. This interest is based on several considerations. First, the trajectory of the obesity epidemic in the U.S. has been remarkably similar to the growth in consumption of restaurant foods over the past several decades.^{3, 4} Second, during this period, super-sizing of food and beverage portions at restaurants has become widespread and, unlike the mandated calorie and other nutrition information provided on packaged food products, such information is not generally available at the point of purchase in restaurants. While some restaurant chains provide this information on Web sites and brochures, it is unlikely that the vast majority of consumers would access this information prior to their menu item selections.

Third, studies have shown that most people, including nutritionists, greatly underestimate the caloric content of restaurant menu items and, therefore, could benefit from having readily accessible information on



the calorie content of menu items.^{5, 6}

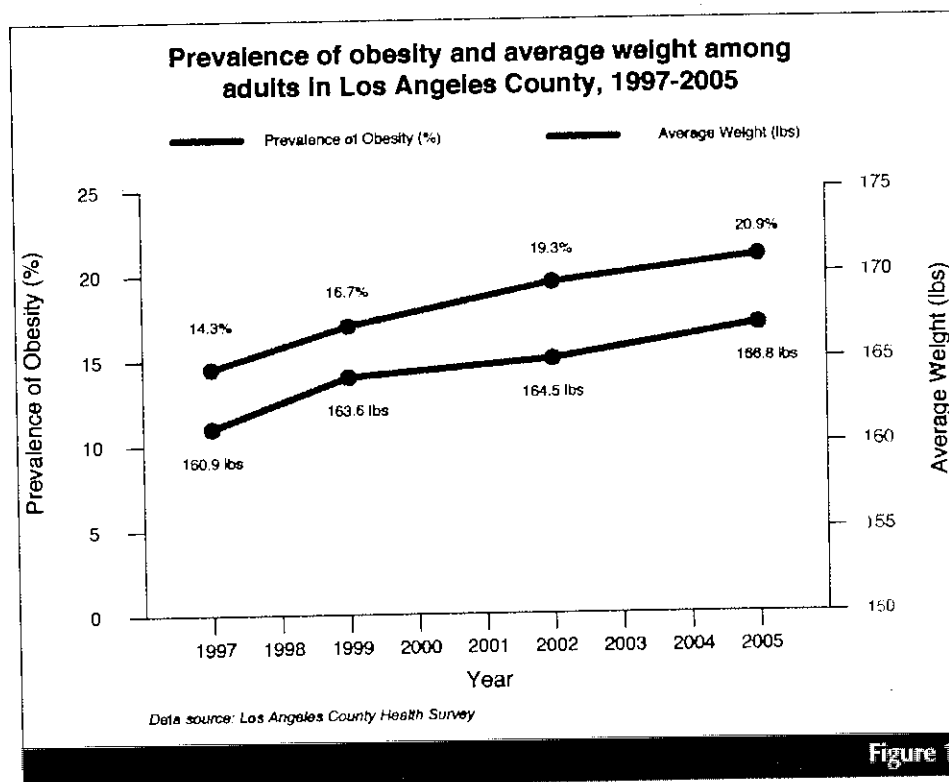
Despite the growing interest in menu labeling and the passage of menu labeling ordinances in some jurisdictions (e.g., New York City, Seattle, and San Francisco), no studies to our knowledge have sought to quantify the potential impact of this strategy on the obesity epidemic. To address this gap, we conducted a health impact assessment of menu labeling, as proposed in California's Senate Bill 120 in 2007 and in the current Senate Bill 1420 (2008), to estimate a plausible range of impacts this strategy would have on the obesity epidemic in Los Angeles County. Both bills require that restaurant chains with 15 or more outlets across the state post calorie and other nutrition information next to each item on the menu. For menu boards, only calorie information is required to be posted. The 2007 bill was approved by the state legislature but vetoed by the Governor, and the 2008 bill is currently under consideration by the legislature.

Methods

Quantifying the magnitude of the obesity epidemic in Los Angeles County

The obesity epidemic among adults (>18 years old) in Los Angeles County was quantified using data from the 1997 and 2005 Los Angeles County Health Surveys. The two surveys collected health data, including self-reported height and weight, on a random sample of 8,004 and 8,648 adults, respectively, through a structured telephone interview. The response rate for each survey was 52% and 47%, respectively. The data were weighted to reflect the demographic characteristics of the county's adult population using census-based population estimates.

The standard public health definition of obesity is a body mass index (BMI) of 30.0 or greater, a measure that is calculated from a person's height and weight. Using this



definition, the percentage of adults in the county who were obese increased from 14.3% in 1997 to 20.9% in 2005 (Figure 1). However, in order to assess the impact of menu labeling, we used an alternative approach to characterizing the obesity epidemic based on the increase in the mean (average) weight of an adult in the county population between 1997 and 2005. As shown in Figure 1, both the adult obesity prevalence and the average adult weight showed similar increases during the period 1997 to 2005. The average adult height during this time period did not change (data not shown).

Total adult population weight gain associated with the obesity epidemic for the period 1997 to 2005 was calculated by subtracting the average weight of an adult in 1997 from the average weight in 2005, and multiplying the difference by the number of adults in the county population in 2005. The average annual population weight gain was calculated by dividing the total population weight gain for the period 1997-2005 by eight (the number of years in the time interval).

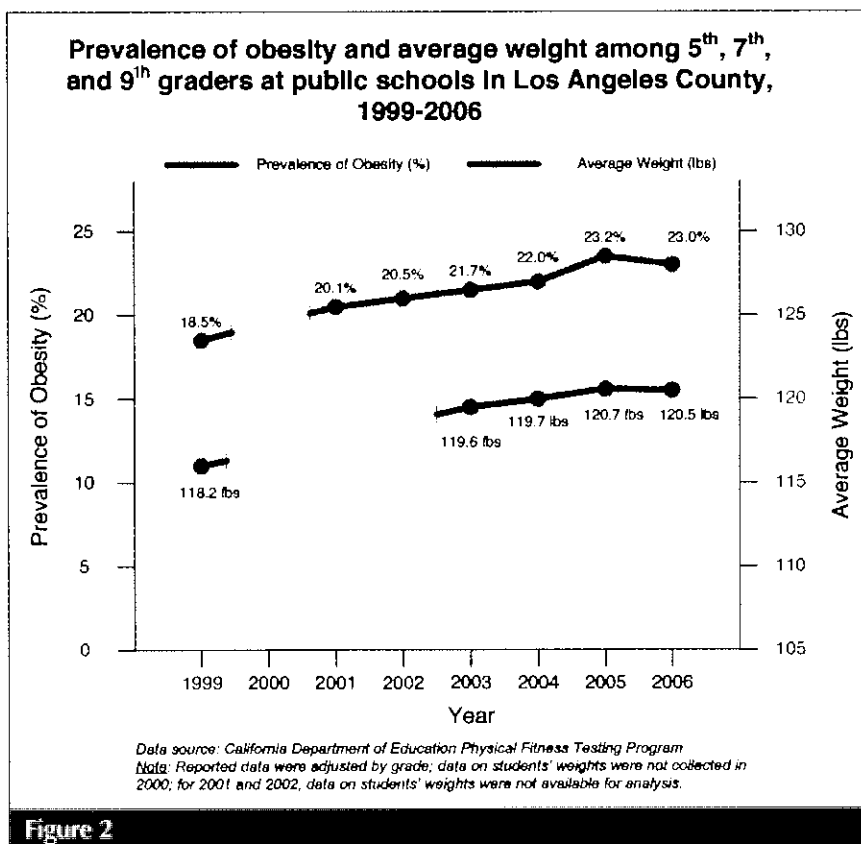


Figure 2

Total population weight gain for children and adolescents aged 5 to 17 years was calculated in a similar manner using 1999 and 2006 data from the California Department of Education Physical Fitness Testing Program (Figure 2). This program requires fitness testing, including measured height and weight, of all 5th, 7th, and 9th grade students enrolled in public schools in the state. We limited our analysis to students enrolled in public schools located in Los Angeles County. A total of 173,315 students were included in the 1999 county database and 333,649 in the 2006 database. The results were adjusted by grade level because the 1999 database included a higher percentage of 5th graders (41%) and a lower percentage of 9th graders (26%) compared to the 2006 database (36% and 31%, respectively). This difference reflected the fact that high schools were slower to begin participation in the program, which was initiated in 1999, than were elementary and middle schools.

The trends in child obesity and average student weight were similar from 1999 to 2006 (Figure 2). In addition, the trends were also similar across the three grade levels and, consequently, we made the assumption that weight gain was similar for all school-aged children (i.e., those aged 5 to 17 years). We excluded children under age 5 years from the analysis because we did not have reliable population

data on recent weight gain in this age group. In addition, we did not have data to estimate plausible changes in menu selections at fast food and other large chain restaurants in this age group as a result of menu labeling (see below).

Quantifying the potential impact of menu labeling on population weight gain.

The sequence of calculations made to estimate the percentage of population weight gain that would be averted as a result of menu labeling is shown in Table 1. We used data on restaurant revenue, large chain restaurant market share, and restaurant meal prices to calculate an estimated total number of meals served annually in Los Angeles County at large chain restaurants where menu labeling would be required under the state bill. We then used both published and unpublished data to estimate the percentage of restaurant patrons who would order reduced calorie

meals, and the average per meal calorie reduction, as a result of calorie information being posted on menus and menu boards.

These estimates were used to calculate the annual population-wide reduction in caloric intake attributable to menu labeling. Reduced caloric intake was converted to pounds of weight gain averted using a conversion factor of 3,500 calories per pound.⁷ The percentage of population weight gain averted due to menu labeling was then calculated by dividing the pounds of weight gain averted by the average annual population weight gain.

We assumed in the calculations that restaurant patrons who ordered reduced calorie meals would not increase their food and beverage intake at other times during the day. This assumption is supported by research indicating that small decrements in caloric intake of the magnitude used in our analysis are not associated with a compensatory increase in caloric intake later in the day or over a period of several days.⁸ We also assumed that persons who ordered reduced calorie meals would not alter their physical activity level and that their resting metabolic rate would not change as a result of the small reduction in caloric intake.

Table 1
Data sources and methods for quantifying the impact of menu labeling on population weight gain

Variable	Estimate	Data Source/Method of Calculation
1. Total annual restaurant revenue, Los Angeles County	\$14,600,000,000	Projected restaurant sales for 2007 in California as reported by the National Restaurant Association, web site: http://www.restaurant.org , accessed September 2007. County revenue estimated by multiplying the California sales estimate by 0.27, the proportion of the state's population in Los Angeles County (data sources: statistics from county and state)
2. Large chain restaurant market share — 15 or more stores in California	51%	Extrapolated information from the NPD Group, 2005, cited in the U.S. District Court Declaration of Thomas R. Frieden, Commissioner of the New York City Department of Health and Mental Hygiene, July 5, 2007 (pg 31).
3. Large chain restaurant revenue, Los Angeles County	\$7,446,000,000	Calculated by multiplying the estimates in variables 1 and 2.
4. Average price per meal in large chain restaurants (includes fast food and sit-down restaurants)	\$7.80	Based on national meal price estimates in 1992 (Jekanowski, 1999) [†] , adjusted for inflation using a factor of 2.866% per year compounded (based on the Consumer Price Index).
5. Annual number of meals served in large chain restaurants, Los Angeles County	954,615,385	Calculated by dividing the estimate in variable 3 by the estimate in variable 4.
6. Annual number of meals served, ages 0-4 years	36,500,000	Estimate derived from the 2005 Los Angeles County Health Survey data.
7. Annual number of meals served, ages 5 and older	918,115,385	Calculated by subtracting the estimate in variable 6 from the estimate in variable 5.
8. Percentage of large chain restaurant patrons who select reduced-calorie meals as a result of menu labeling	10%	Extrapolated from data published by Burton et al., Am J Public Health 2006;96:1669-1675.
9. Annual number of reduced-calorie meals	91,811,538	Calculated by multiplying the estimates in variables 7 and 8.
10. Average amount of calorie reduction per meal	100	Unpublished survey data (personal communication: Dr. Lynn Silver, New York City Department of Health and Mental Hygiene, December 3, 2007).
11. Total annual number of reduced calories attributable to menu labeling	9,181,153,846	Calculated by multiplying the estimates in variables 9 and 10.
12. Calories per pound of weight	3,500	Duyff RL. American Dietetic Association <i>Complete Food and Nutrition Guide</i> . Hoboken, New Jersey: John Wiley and Sons, 2002 (page 36).
13. Total annual pounds of weight loss attributable to menu labeling	2,623,187	Calculated by dividing the estimate in variable 11 by the estimate in variable 12.
14. Average annual population weight gain, ages 18 years and older (pounds)	5,500,000	Calculated using data from the 1997 and 2005 Los Angeles County Health Surveys.
15. Average annual population weight gain, ages 5 to 17 years (pounds)	1,250,000	Calculated using data from the 1999 and 2006 California Department of Education Physical Fitness Testing Program.
16. Average annual population weight gain, ages 5 years and older (pounds)	6,750,000	Calculated as the sum of the estimates in variables 14 and 15.
17. Percentage of population weight gain averted due to menu labeling	38.9%	Calculated by dividing the estimate in variable 13 by the estimate in variable 16.

[†] Jekanowski MD. Causes and consequences of fast food sales growth. *Away-From-Home Foods* (report), 1999.

In the base scenario shown in Table 1, we assumed that 10% of restaurant patrons would order reduced calorie meals and that they would reduce their order by an average of 100 calories as a result of menu labeling. Because of the uncertainty of these estimates, we conducted simulations on a range of scenarios to assess variation in the results assuming different levels of consumer response

to the calorie postings. We also conducted separate and combined sensitivity analyses for the total restaurant revenue estimate, the large chain restaurant market share estimate, and the average price per meal estimate given the uncertainty of these estimates.

Results

Among those 5 years of age and older, the average annual population weight gain associated with the recent obesity epidemic in the county was 6.75 million pounds (Table 1). This estimate was based on an average annual population weight gain of 5.50 million pounds among adults 18 years and older during the period 1997-2005, and an average annual population weight gain of 1.25 million pounds among children aged 5-17 years during the period 1999-2006.

As indicated in the base scenario shown in Table 1, if menu labeling resulted in 10% of large chain restaurant patrons ordering reduced calorie meals with an average reduction of 100 calories per meal, a total of 38.9% of the 6.75 million pound average annual weight gain in the county population aged 5 years and older would be averted.

Simulations of other scenarios indicate that substantially larger impacts would be realized if higher percentages of restaurant patrons ordered reduced calorie meals or the magnitude of the average per meal calorie reduction was increased (Table 2). If reduced calorie meals were increased to 20%, for example, 77.7% of the population weight gain would be averted over the course of a year, even if the average per meal calorie reduction remained unchanged at 100 calories. If the average per meal calorie reduction increased to 125 calories among the 20% of patrons who ordered reduced calorie meals, the population

weight gain averted would reach 97.2%, indicating an approximate leveling of the obesity epidemic as measured by population weight gain. Further increases in either the percentage of patrons ordering reduced calorie meals or in the average per meal calorie reduction would result in a net population weight loss (>100% population weight gain averted), suggesting a potential reversal of the obesity epidemic.

Due to the uncertainty of some of the estimates used in our scenarios, sensitivity analyses were performed for three of the key variables in Table 1: total annual restaurant revenue, large chain restaurant market share, and average meal price. Results of these analyses demonstrate that our findings are relatively insensitive to variation in the estimates of these three variables. For example, an error of up to +/- \$1 billion in our estimate of total annual restaurant revenue would yield a result for population weight gain averted within the range of 36.1% to 41.6%. An error of up to +/-5% in our estimate of large chain restaurant market share would yield a result for population weight gain averted ranging from 34.9% to 42.8%. An error of up to +/- \$1.00 in our estimate of average meal price would yield a result for population weight gain averted ranging from 34.3% to 44.8%. In the sensitivity analysis of all three variables combined, the estimate of population weight gain averted ranges from a low of 28.5% to a high of 52.8%.

Table 2
Impact of consumer response to menu labeling on the percentage of population weight gain averted: simulation of multiple scenarios of calorie reduction.[§]

Average Amount of Calorie Reduction per Meal	Percentage of Large Chain Restaurant Patrons Who Purchase a Lower-Calorie Meal as a Result of Menu Labeling				
	10%	20%	30%	40%	50%
25	9.7%	19.4%	29.1%	38.9%	48.6%
50	19.4%	38.9%	58.3%	77.7%	97.2%
75	29.1%	58.3%	87.4%	116.6%	145.7%
100	38.9%	77.7%	116.6%	155.4%	194.3%
125	48.6%	97.2%	145.7%	194.3%	242.9%
150	58.3%	116.6%	174.9%	233.2%	291.5%
175	68.0%	136.0%	204.0%	272.0%	340.0%
200	77.7%	155.4%	233.2%	310.9%	388.6%

[§] Percentages presented in the table refer to the percentage of population weight gain averted.

Discussion

The results suggest that mandated menu labeling at fast food and other large chain restaurants could reduce population weight gain, even with only modest changes in consumer behavior. In addition, simulations of a range of scenarios suggest that the impact on population weight gain could be greatly enhanced if community education efforts, pricing incentives or other strategies were undertaken to increase the degree to which restaurant patrons use the posted information to select reduced calorie meals.

A limitation of our analysis is that we were unable to assess the effect of menu labeling on the obesity epidemic directly (i.e., its impact on the rising rate of obesity) but, rather, estimated its effect using population weight gain averted as an alternative measure. Although we showed that the recent trends in the obesity rate and average body weight were similar, we cannot be sure that the impact of menu labeling would be identical across the two measures. For example, if obese restaurant patrons were more likely than non-obese patrons to order reduced calorie meals, the impact of menu labeling on the obesity rate could be greater than what we reported for population weight gain averted. Alternatively, if non-obese restaurant patrons were more likely to order reduced calorie meals than obese patrons, the impact on the obesity rate could be less than what we reported. Further research is needed to assess the effects of menu labeling.

The analysis was further limited by the lack of county-specific data on restaurant revenues, large chain restaurant market share, and average meal price. However, the sensitivity analyses we conducted suggest that our results were relatively insensitive to these variables and, therefore, any small to modest error in the estimates we used are unlikely to have led to major error in our findings.

Finally, we had only limited data on the degree to which menu labeling would influence the menu item selections of restaurant patrons. For this reason, we provided a range of estimates, assuming varying levels of change in consumer behavior that could be very easily achieved. For example, based on a composite of calorie information from three fast-food restaurant chains, changing from a double meat patty

to a single meat patty hamburger would save 244 calories, from a large to a medium order of french fries would save 163 calories or from a large to medium soft drink would save 95 calories. Our findings suggest that, even with only modest changes like these, the impact of menu labeling on population weight gain could be substantial.

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